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The International Journal of Accounting

A.C. Littleton's Very Long-Term Perspective of Public Accounting Practice: Historical, International and Ethical Foundations

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Key words: Littleton; Continuity; Ethics; History; Practice; Utility

Abstract: *This paper attempts to analyse the very long-term perspective of A.C. Littleton in the context of continuity as the focus of explanation in historical inquiry. The historical orientation is shown to have been influenced by the philosophy of John Dewey and by his concepts of a "situation" and of "awareness." Financial reports which have been justified by a professional in public practice seemingly are regarded by Littleton to be iconic in nature. These reports are argued to provide utility in a collective sense only when interpreted with respect to very long-term planning horizons for cultural change.*

"A century ago in England, the early series of companies acts gave clear evidence that accounting could also serve the public interest. And during the last twenty five years in the United States, the doctrine of full disclosure in financial statements has arisen because the public interest is deeply involved in corporation affairs."(Ref.1, pp.187–188).

In recent years a positive approach to accounting research has emerged, at least partly in response to advocacy for the acceptance of general normative theories. Although such normative theories often lack evidence to support their adoption in the world of practice, this need not necessarily limit their popularity and influence at any point in time.[2,3]

By way of historical illustration, Littleton's objection to the arguments of pressure groups promoting the use of replacement costs over 50 years ago may be cited. The issues involved were (1) the setting of "cost plus" prices to consumers by public utilities and (2) the need for balance sheets to reflect the stock market capitalization of the prospective earnings of private corporations (Ref.4, p.294). In more recent years, the valuation of public infrastructures as a reporting issue

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continues unabated.[5] Also, empirical verification of the usefulness for valuation and decision purposes of replacement cost data in a market setting remains elusive.[6,7]

Concern for the reluctance of the professional accounting bodies to enforce common allegiance to one or other of the deductive normative market theories appears to have waned. Even so, evidence exists in a more positive setting that professional concepts can still guide a practitioner's attitudes to work.[8] Theorists may have become more interested in both the short-run and continuing consequences of the adoption in practice of various accounting standards and of associated reporting methods rather than in general proposals for measurement reform.

A diversity of means of reporting has long been associated with the philosophy of John Dewey, whose works can be shown to have influenced Littleton (Ref.9, p.132). Blair stated,[10] as a public practitioner influenced by Dewey, that it is "uniformity of purpose we are seeking, not uniformity of practice, that is uniformity of ends, not uniformity of means" (Ref.11, p.388).

A strategy is to be used here to capture the nature of Littleton's very long-term structure of accounting practice. It is to examine certain key topical issues. This will involve:

(1) a brief initial synthesis of Littleton's ideas;
(2) an examination of historical research methodology – its nature and credibility;
(3) identification of normative and positive "situations" in accounting;
(4) definition of the "end" of professional accounting practice;
(5) postulation of uniform marginal utility – the very long-term condition for the feasibility of professional public practice.

The purpose is to isolate for further examination certain conditions for integrity in historical inquiry. These conditions are argued to be real-world linkages between accounting theory and professional practice.

Synopsis of Littleton's Historical Focus and Purpose

The "end" or purpose of regulated financial disclosure has been identified by Littleton to contain both a professional and a historical component (Ref.9, ch.1). In practical terms the professional justification of funds flows, which should all be revealed by the gross income statement and associated formal reports (p.95), can be denoted by the term transparency or "lack of deception" (p.15). A problem for theory construction may be that the Dewey/Littleton very long-term structure sits uneasily among the ideas of the more modern positivists who also emphasize induction and those of the generalists directing construction of deductive normative models.

At issue is a normative tinge to Littleton's inductive views. This springs from his concentration upon accrual-based accounting as the instrument by which financial reports are derived. Ideally, in his view, an income statement under

accrual accounting should reflect relative utility. This is because transactions when scrutinized by an auditor are assumed in accounting to denote reciprocity as a customary and legal issue between producers and purchasers (Ref.9, p.17). Transactions are therefore useful for qualitative measurement in matching the seller's "cost price outlays" and the buyer's "buying price outlays" (Ref.12, p.198). This evolved into the ultimate view of Littleton that accounting "lacks universality and accountants will not be persuaded otherwise by assertions that it ought to rest upon principles of universal truth" (Ref.13, p.358).

Littleton's concept of double-entry accrual accounting resting upon relative utility or a comparison of the thing received and the thing given (Ref.12, p.196) seems to be operationally suspect. However, this will be shown not to be necessarily so. The context of the very long-run evolutionary horizon of this philosopher and historian may be quite different from a pre-decision information-gathering environment in which dwell many users, particularly economic and regulative users of published financial statements.

For Littleton, "capital maintenance" is simply another policy option for management to ponder (Ref.9, p.23), whereas gross income, the focus of change (reality), is in fact "a recovery of costs advanced, a fruition of a future now become the present, a measure of accomplishments secured. In contrast net income is merely a plus or minus" (ibid.).

The writings of Littleton have identified a thrust for accounting theory and practice which has received little attention for over 30 years. However, it is not necessarily important whether some people at any point in time consider a structure of thought to be outdated or even intellectually barren. There can be many philosophical views during a lifetime as long as that of accounting or even as short as that of regulated external reporting.

The purpose of this paper is to examine further the elements of Littleton's structure in the time frame for which it was constructed. In his sense of historical evolution being applied to financial affairs for the period from 1844, the existence of regulated financial disclosure in the United Kingdom to the present day is very short. It may be insufficient to detect fundamental change in the practices of the profession, particularly if accounting is ultimately a means for the achievement of some uniform and socially worthy end. Littleton's focus or structure of accounting theory provides for a history in evolution.

Historical Research Methodology and the Nature of Explanation

Historical Interpretation and Objectivity

In the accountancy literature there has been a concerted effort for some decades to develop scientific methods of inquiry. These methods are intended to strengthen the rigor of theory formation and to provide for the corroboration of hypotheses through evidence collection and empirical inference. Bronowski[14] observed that in

the post-war years the scientific method gained an ascendancy over other legitimate methods of inquiry. Also, Hempel[15] specifically criticized historical research as lacking objectivity and having only limited explanatory power.

The *sui generis* argument implies that historical research has a unique methodology. It is widely held by the community of historians that historical investigation, in contrast to scientific experimentation and scientific inquiry generally, is concerned with the identification, description and assessment of the effect of past events. History is not specifically charged with the discovery of general laws which might have governed those events.[16] On the other hand, prediction in the empirical sciences may use logical deduction from stated antecedent conditions and general laws to anticipate a defined event yet to occur. Thus the logical structure of scientific prediction conforms with the logical structure of scientific explanation.

When explaining events of the past historians do not necessarily seek either general laws or antecedent conditions. This does not imply, however, that historians never use general laws (Ref.17, p.15). In historical analyses the credibility problem appears to lie with requirements in science for the explicit or conscious formulation of precise underlying assumptions and of operative general laws. However, in history it is not usually possible to build a system of deductive propositions that is in broad agreement with the totality of the relevant available empirical evidence. Munz[16] emphasized that historical explanation can be embedded in the structure of the historical narrative. Without such an explanatory structure, the narrative itself "would not only be unintelligible but it would not even be a narrative... The problem of explanation is the problem of why narratives are intelligible" (p.70).

A further issue has been raised by Ernest Nagel,[18] who distinguished between "nonmothetic" sciences, which establish general laws to guide infinite repetition, and the "ideographic" sciences. The latter denote the unique and the non-recurrent sciences and do not necessarily connote generality criteria. Logical methods used and the ensuing conceptual structures of explanation are usually different in these branches of science. Furthermore, history is not concerned with prophecy as its major focus but with improved comprehension of the nature, substance and cause of present events.

Where the weight of evidence is compelling, however, historical reasoning may offer intuitive guidelines for predicting further patterns of events and behavior. Nevertheless, testing tends to have haphazard outcomes. This is because it is tied to correlating explanation with relevant documented evidence rather than with prediction, which has had little connection historically with historical explanations.[19]

Because historical research is naturally selective of its areas of investigation and of evidence collection to support a narrative, explanation is inevitably stamped with arbitrariness and subjectivity. There is also, in Nagel's view, an undesirable personal and social bias. Every historical investigator approaches issues with information and guiding ideas from a dominant host culture. This problem may be further compounded in research in social sciences such as economics. Here, policy implications of the adoption of certain antecedent assumptions are not captured

overtly by the ensuing logic of explanation. According to Myrdal,[20] the transparency of policy assumptions provides the first step towards objectivity in the social sciences. The long-run emphasis of Littleton on justification may have similar implications for accounting which, in his view, is not strictly a science (Ref.9, p.135, 147).

Littleton argued on the basis of historical evidence that justification is an element inducing transparency of distributions of funds or "lack of deception" (Ref.9, p.15). Justifications such as exchanges in practice provide the rational for regulated financial disclosure and for the continuing application and growth of accrual accounting expressing "relative utility" or "fair dealing" in business and public affairs. Weightings of ethical factors and of historical explanations of practice may then become associated in a methodological sense. This will normally be concerned with the response in practice over time by professional accountants to departures under regulated disclosure from overriding and generally accepted measurement guidelines. These customary restrictions are adopted in the community over time and often over very long periods of time (Ref.21, chs.1–3).

Historians and scientists alike might well have reservations in defining the common good to which, presumably, cultural conditions inducing reciprocity or "fair dealing" (Ref.9, p.17) may be related. These should ultimately guide accounting practices (ibid.). However, it is also necessary to observe that no scientific definition of accounting as a measurement process is sufficiently comprehensive to embrace Littleton's reference for justification or transparency as a cultural issue. We find "broad" definitions of accounting in a decision framework of scientific explanation and prediction. These simply need not embrace the qualitative dimensions of regulated financial disclosure and attaching concepts of professionalism. Such phenomena must therefore be supposed to lie outside of accounting per se.

Thus "accounting broadly conceived as the measurement and communication of economic information relevant to decision makers" (Rappaport in Ref.22, p.XII) may be incomplete if used as a frame of reference to capture and explain what professional accountants have accomplished in practice since 1844. Furthermore, it may lack objectivity in the Myrdal sense if the basic policy maxims underlying economics are not clarified in the context of accounting measurement. This task will be examined in the concluding analysis.

Credibility of Historical Research

The view that historians cannot apply their research efforts within the rigorous framework afforded by deductive systems is daunting (Ref.23, pp.14–15). However it has been illustrated that progress in historical analysis has occurred under an incomplete definitional focus. Also, attempts to link historical research with the methods of the natural sciences can reflect a misunderstanding of the purpose and *sui generis* nature of historical research.

The *sui generis* perspective of historical reasoning has been abstracted from philosophical debate on the objectivity of historical explanations. Certain qualities

of *sui generis* which may provide impediments to the application of the scientific method can be identified as follows:[19]

"Historical events are past events and hence cannot be observed in the same manner as present events or manifestations of events.

Historical events are difficult to classify being related to particular occasions and to particular circumstances.[24]

History describes actions and thoughts rather than the behavior of physical matter, and

Historical events have irreducible complexity and diversity."

With respect to the last-mentioned impediment Gardiner noted that the aim of the historian is to capture an occasion in all of its variety and richness. Thus historical terminology is adapted to this task, although the definition of terms often is left vague (Ref.19 p.53):

"Generalizations about revolutions, class struggles, civilization, must inevitably be vague, open to a multiple of exceptions and saving clauses because of the looseness of the terms they employ"... (Ref.19, pp.60–61).

History is severely limited from the point of view of scientific method. Interpretation and analysis lack the creation of general laws under stated initial conditions and the subsequent deduction of explanatory and predictive statements. The objectivity of historical study can be questioned and difficulties with definitional precision leave empirical corroboration as a doubtful possibility in practice. In this sense, attacks[25,26] upon Littleton's structure of accounting theory[9] may be attacks generally upon historical inquiry as a research method in accounting.

Although some historians see the primary objective of history as scientific development of the knowledge of human thought processes,[27] the general thrust has been a fundamental concern with progress and continuity towards human awareness and growth. August Comte in the "Positive Philosophy" captured this thrust. It will be pursued here with respect to the evaluation of professionalism under regulated financial disclosure: "No conception can be understood except through its history." Also, the purpose of historical inquiry in Littleton's mind can be envisaged (Ref.9, pp.137–138). It is the comprehension and awareness of the nature of the elements which combine to create a present "situation" on a path of continuity (Ref.28, chs.5–6). Woodbridge[29] identified history as continuity:

"The quest for origins has been of absorbing interest. It would seem that we can never understand anything at all until we have discovered its origins in something which preceded it."(Ref.29, p.63).

Objectivity in historical research must rest upon a broad agreement among accepted authorities in a given field of inquiry.[16] Such objectivity may also be achieved by the presentation of reliable source data and documentary evidence. This will need to be strong if a point of view differs substantially from an accepted body of research. However, positive accounting research may need a professional as well as a technical orientation if its relevance to the realities of practice is a consideration in the world of business and public affairs.

Overall, an exercise in historical research is compelling by the evidence presented, the persuasive structure of the narrative argument and the interpretive and philosophical insights of the historian. Relevant accounting research in the context of long-run improvements in practice may ultimately need to be developed along these lines, which, at least in part, were developed initially by Littleton.

Positive "Situations" in Accounting

Moving towards a further study of these contentious issues, the conceptual fundamentals and technical elements appropriate to the discipline will be examined. Littleton's "indispensable element" extracted from the observation of practice sees accounting defined as a means to promote understanding of enterprise activities. This is an after-the-event concept. The central purpose of accounting practice is based upon "observation" of evolution and change. It is "to make possible the... matching of costs (efforts) and revenues (accomplishments)" (Ref.9, p.30).

For Littleton, this is a question of the authenticity of nominal or income accounts (revenue and expense) rather than the accuracy of measures of net worth at a period's beginning and end. To advance matters, given a dynamic economy, Edwards and Bell[30] changed the rule:

"The basic purposes of accounting are to measure for a business unit its efforts (costs), its accomplishments (revenues), its success (the difference) over time, and its position (what it owns and owes) at any moment in time." (Ref.30, pp.6–7).

This concept is remote from the evolutionary view held by Littleton, which rests upon his notion of "relative utility" being the ethical/social foundation of accrual accounting. However, whether unadjusted historical price captures this grand vision given an accrual-based accounting framework is a different issue. It is yet to be fully addressed as an evolutional phenomenon under wide-ranging analysis appropriate to a learned literature rather than valuation arithmetic and market price observations. Littleton continued:

"The idea of enterprise service suggests a desirable contribution to society and it implies, by and large, that the contribution is worth what it costs," (Ref.9, p.24). and

"Suitability as to costs means assigning costs according to service efforts made" (op. cit., p.67).

These notions of social contribution being the focus of the professional justification under periodic matching were rejected by the deductive theorists Edwards and Bell in a wide-sweeping current market demolition of history, custom and tradition:

"We are here thinking of the term "efficiency" in the economic sense associated with Paretian optimality... Whether this is a point of maximum welfare depends essentially on the distribution of income... maximum welfare depends upon the arbitrary establishment of a social welfare function, given the impossibility of interpersonal comparisons of utilities." (Ref.30, p.271).

Presumably this "arbitrary" social welfare function connotes compliance with all the statutory regulations, laws and precedents which guide practicing accountants, at least beyond the technical measurement stage. An accountant in practice who ignores such a function would appear not to be in the public practice of accounting, given the fundamental nature of this function within the discipline. Furthermore, Edwards and Bell have been attacked on the question of utility evaluation (Ref.31, p.222n).

As has been mentioned above, Littleton's philosophy (Ref.9, pp.132, 137–138) is directed to evolution through the writings of John Dewey. A "situation" for Littleton is not then simply some quantitative measurement valuation that becomes established in terms of dollars and cents for some specified reason in a market environment at a specific point in time. Nor is it simply an induced consequence in the real world of applying accounting techniques under private interests.

Operationality in the Dewey sense may be stated in professional fields such as education (Ref.28, ch.6) to be the harnessing of rational thought to a process of growing (cf. Kanne,[32] pp.1213–1217). This frame of reference for growth is a state of intellectual freedom devoted to "social purposes that are intrinsically worthwhile." Growth occurs as a process of experiential evolution. Experience has two elements – interaction (internal awareness and external objects and consequences) ... and continuity. These elements come together over time in an environment of reality or evolutionary change to form something that Dewey called a "situation".

A situation for Littleton cannot be understood in individualistic terms because there is "a very large community of interests behind every income statement" (Ref.9, p.33). Following Dewey and Peirce,[32] Littleton (Ref.11, p.388) was aware of powers for and against conventional attitudes and stationary states and also of influences of financial reporting upon both established and potential business practices and community attitudes. As an aid for terminating unacceptable business practices accounting can promote "fair dealing and moral responsibility" (Ref.9, p.17).

We will attempt to show that very long-run concepts of utility and of customary/legal constraints for fair dealing can cause practitioners to look beyond excesses which have been shown to be permitted by accounting and reporting guidelines under private interest theory.[35] An alternative focus which Littleton seemed to have imported from Britain is the notion of social control. This international concept, based upon the sovereignty of legislative intent in a diversity of countries, can provide, in his view, the focus of very long-term structures of accounting. Such a theory is seen to have been implicitly governing regulated reporting and also its justification by professionals in public practice under very long-term collective goals:

"Keeping accounts and subjecting them to audit was made a statutory requirement. The British Parliament, particularly in 1845 and 1862, in this way acknowledged the fact that accounting could be used in the public interest. It was in the public interest that men should be permitted again to form stock companies after a prohibition that had lasted for a century." (Ref.9, p.106).

Evolution and Social Control

Littleton concentrated on the history of auditing, accounting and law (Ref.9, ch.6) to explain the nature of independent professional investigations which support external financial disclosure. Historical narrative is used to promote understanding of his concepts of the nature of professional continuity and its growth across international boundaries. What of significance happens, he might ask, in so short a historical time period as a hundred years, more or less, that it forever reshapes thinking on the fundamental issues in accounting of morality and culture? Technological, demographic and political realities of change may be very significant in such a period. However, given such environmental thrusts and pressures, professions may nevertheless have to retain concepts of cohesion and continuity which alone guide co-operative effort towards very long-term accomplishments or "situations." Professions over time, given continuity in the public interest, can focus on traditional guidelines of equity (Ref.21, chs.1–3). Two "situations" as professional challenges rather than simply market opportunities were described by Littleton:

"The development of accounting has been relative to society's own development. It is unlikely that professional auditing would have appeared when it did if England had lacked a parliament or had one which was unresponsive to the social needs of the time," (Ref.36, p.365), and further.

"The germ of cost accounting, therefore, lay in the factory system of production. But it needed the soil of the industrial revolution to help it grow towards its fruition." (Ref.36, p.368).

Such "situations", being explanation as internal awareness for the historian and professional and coupled with external observation under intellectual freedom, can drive political sovereignty to the point of regulation. "Freedom" as an accountability concept with a prescribed and formal knowledge base in accounting has been directed by Littleton towards a specific philosophy enunciated by Dewey for professional educators (Ref.28, chs.5 and 6).

Questions such as these posed by Dewey have been very much to the forefront of positive research into aspects of external reporting and regulation in recent years.[3,35] However, Littleton's concern was that accounting as a technology and as a statistical support for financial reporting should advance "growth" or continuity by inducing managers generally and business people specifically "to operate with a good sense of fair dealing and moral responsibility" (Ref.9, p.17). That is, accrual accounting, with its emphasis on exchange or "relative utility" reflecting reciprocity or observable long-lived customary edicts of value for money, thus makes its contribution to the common good.

In the very long-run perception of this philosopher/historian[37] we are emphasizing a lack of priority in accounting theory for both (1) the provision of current market-value-driven economic information for before-the-event decision-making and (2) short-run private interest constraints on managerial and business behavior (Ref.9, pp.98–99). Bedford and Ziegler may have been critical of the first

deficiency (Ref.37, p.422). However, Littleton's perspective, like Dewey's, was not individualistic and his time horizon looked well into the future. Dewey continued:

"There can be no greater mistake than to treat such freedom as an end in itself. It then tends be destructive of the shared co-operative activities which are the normal course of order. But, on the other hand, it turns freedom which should be positive, into something negative. For freedom from restriction, the negative side, is to be prized only as a means to freedom which is power: power to frame purposes, to judge wisely, to evaluate desires by the consequences which flow from them; power to select and order means to carry chosen ends into operation."[28]

With publication of accrual-based audited reports as a restriction upon practical affairs, there still remains a need for the evaluation of their justification in practice to be governed by theory. As Dewey saw it, professional practice in general may then become more rational and less under the control of customs or traditions which no longer reflect existing conditions (Ref.9, p.238). One problem could exist which may have enforced the dichotomy between theory and practice in accounting. This issue, which Littleton saw to be fundamental, could be the observable longevity of those particular community traditions and customs of relative utility in exchange which sponsored external reporting in the mid-nineteenth century in England and later in the United States. That is, although changes in developed countries could reflect movements from laissez faire to the welfare state and thence to technocracy and on to the post-industrial society, the fundamental traditions and customs which support accounting measurement and financial reporting need not have changed. In Littleton's view, this is a question of research, not of assumption. Cultural beliefs and customary conventions take on legal and institutional forms which may change only very slowly as they direct interpersonal co-operation and social cohesion as means of achieving long-run continuity, being the focus of historical explanation.

Such explanatory truths for Littleton are revealed through his view of scientific method:

"The advancement of science has been founded on two factors, (1) close detailed examination of experience in clearly marked areas and (2) constant striving to perfect an increasingly complex organization of that experience. Yet that organization of knowledge always seems to be imperfect to the scientist; absolute truth still escapes. The more complete, the more accurate, the more subdivided into categories that the organization of an area of knowledge becomes, the closest we come to truth in that area." (Ref.38, p.377).

Experiences of the last 30 years may now leave theorists more amenable to this concept and to consequences of evolutionary order rather than to revolutionary disorder in business affairs.

The concept of relevant periodic matching developed strongly after the Great Depression of 1929 in America. Ideally in practice, the matching of costs (efforts) and revenues (accomplishments) provides accounting with its collective pragmatic base within a logical structure (Ref.33, ch.10). This technical definition of fairness

with a collective sense provides a "periodic situation" which was analysed by Littleton as follows:

"Reduced to its barest essentials, an income statement is a calculation (1) of the revenue produced by the operations of the enterprise, and (2) of the way that total has been divided among the claimants. Although the dividing of revenue is generally controlled by statute or contract, and although many claims are settled in advance of determining gross revenue, it is still an economic fact that revenue is shared. It is also a fact that a complex and unending struggle goes on with change in the sharing as its object.

The independent public accountant is not a party to these contracts, nor is he a critic of their objectives. But his professional opinion supports the income statement in his report." (Ref.9, p.32).

In Littleton's view, theory at this level is a body of doctrine comprised of beliefs, explanations, justifications, descriptions, inferences, arguments, conclusions and principles. Its purpose is to explain and justify practice and to provide a rationale for classifying good practices. Justification at this level however, is a real-world issue associated with the flow of funds to and from organizations and individuals. For Littleton, justification as the abstract consistency of ideas and the feasibility of theoretical concepts may be too remote from practice and custom to be operational. This does not mean, however, that attempts to define the nature of practice will be unrewarded. Rather, this is one method of promoting explanation (Ref.9, ch.8). However, in his view, it is primarily the focus upon doctrine (morality), not measurement method (objectivity), which will lead to the most effective use of external reporting in the long-run:

"Accounting doctrine contains the possibility of being built into a system of coordinated explanations of what accounting is and what it can become." (Ref.9, p.131).

"Fairness" – Definition of Doctrine

Definition of conditions for external reporting will now be attempted as a shorter-run means to longer-run progress or continuity. The Paretian orientation of Mishan may be adapted to this task. However, this can provide only a surrogate for accounting doctrine. Only doctrine contains the seeds of feasibility for guiding the very long-term measurement of continuity (Ref.9, p.131).

Costs of benefits of alternative financial reporting policies constraining management action in the public interest, or providing flexibility to ignore it, raise issues of required compensation. The assumption is that allocative efficiency of resources usage as a longer-run goal remains the primary goal of management; but payment of compensation within clearly defined limits to all disadvantaged parties is equitable or fair or just. When the magnitude of a collective good (such as the maintenance of freedoms within society through the disclosure of all justified and unjustified funds flows (including distributions) is fixed for each individual in the community, then the subjective response by each will be a price. This is the risk

of acceptance/avoidance of the benefits induced. Such an adjustment of price to a change in quantity (rather than the conventional quantity to price) is an "economic" consequence which may affect the welfare of each of the n members of the community.

Risks of acceptance/avoidance may be identified as direct or indirect. With respect to direct risks (voluntary) which individuals accept with consumption of a service, a compensation increment (Pareto improvement) is set as, say r^1jj, the benefit of the service less net effect of risk. Benefits to the user group net of risk $\sum_j^n r^1jj$, are reflected in the demand curve for a product. That is, voluntary aggregate risks (RC^1) are shown by demand and consumer surplus. However, risks that cannot be avoided costlessly point to externalities which must be accounted for socially. Diseconomies external to the industry of financial reporting may be identified as follows.

(1) Direct involuntary risk that is inflicted on the j^{th} person by some specific industry action requiring compensation in the sum r^2jj. For example, the use of a professional standard of historical cost might lead to distributional inequity as undisclosed coercion leading to inflation, unemployment, and elitist allocations of social amenities through taxation, pricing and distribution policies. The interactive general term $\sum_i^n r^1ij(i{\neq}j)$ includes the personal risk for the j^{th} person r^2jj and also secondary effects caused by the impact of the effects on other individuals upon j. Aggregating over the n members of society the total risk compensation is $\sum_j^n\sum_i^n r^2ij$, denoted as RC^2 for all third parties.

(2) (a) Indirect or derivative risk arising as a general relationship between each of the n individuals for the loss of freedoms, voluntary or involuntary, to which other members of the society are exposed. If, on balance, the loss of freedom to the i^{th} person improves the financial position of the j^{th} person, the additional chance of i's loss of freedom is a positive benefit to j, and the compensation sum is positive. Therefore the j^{th} person is willing to pay up to a given sum for the loss of i's freedoms. If, on the other hand, the loss of i of economic freedom would reduce j's real income, then risk compensation sum r^3ij is negative. That is, j would require compensation for the loss of i's freedoms. The general term is $\sum_i^n r^3ij(i{\neq}j)$, and the total risk compensation is given for the members of community as $\sum_j^n\sum_i^n r^3ij(i{\neq}j)$, which is RC^3. The sum can be positive or negative according to how the community as a whole expects to be made financially better off or worse off by losses of individual freedoms under various financial reporting policies.

(b) Indirect or derivative risk of each individual in consequence of the loss of freedom by others as a moral (welfare justice) issue rather than a financial gain or loss. That is, the individual as a member of a co-operative society is concerned with a breakdown in moral values or civility in the community through misleading financial reporting. The compensation sum $\sum_i^n r^4ij(i{\neq}j)$ for the j^{th} person's concern for losses of freedom through inadequate (unfair) disclosure carries a negative sign. The increased risk to which the community as a whole is exposed in aggregate value is $\sum_j^n\sum_i^n r^4ij(i{\neq}j)$, denoted as RC^4, and is a negative social quantity.

In evaluating these components of risk the reduction of undisclosed coercion through professional interpretation of "true and fair" by accounting bodies and the law was represented by Littleton to be a collective good. It is not an external economy that is internal to some other economic activity such as management, investment or banking. That is, for public accounting and the law as professions the question of how much potential users will pay for the statements as either tools of flexible economic management or as relevant information for economic decisions after discounting for the unwanted incidental effects of social control does not arise. The primary issue is reduction of undisclosed distributional coercion and RC^1 need not be policy relevant. However, if we assume that unfair business disclosure in general will eventually affect every individual's freedoms either as primary or secondary effects irrespective of age, occupation, location, physical condition, wealth, training, social position, etc., then the risk of loss of freedoms through unfair disclosure for each citizen is reduced by a specific amount under true and fair reporting. More generally, the j^{th} person has a reduced risk of loss of freedoms (including the impact of loss of freedoms of others on j) for which j will pay $\sum_i^n r^2 ij$ as positive compensation. For society, the aggregate positive sum is RC^2.

A reduction in risks associated with unsanctioned distributions of welfare for all persons becomes, for person j, a reduction in the probabilities of being better off or worse off financially in the future. The risk compensation $\sum_i^n r^1 i(i{\neq}j)$ may therefore be positive or negative in aggregate (RC^3) as a purely financial issue under the Pareto test. Also, each member of society is sensitive, for a variety of reasons, to the maintenance of morality as a lack of undisclosed coercion. Risk of loss occasioned by unfair (anti-social) practices such as unfair disclosure of distributions can be reduced by a compensating payment for risk. The payment for reducing the risk to the j^{th} person of such loss is $\sum_i^n r^4 ij(i{\neq}j)$ or RC^4 as the positive social welfare compensation in aggregate.

Although RC^3 as compensation for reduction of risk of financial gain or loss may be positive or negative, the remaining reductions are positive and indicate that a society may be prepared to pay compensation for avoidance of risk of loss of individual freedoms by unfair reporting practices. Compensation can be referenced to a sacrifice of economic growth as maximization of profits under the marginal utility concept. Sacrifice may be related to the utility of individuals or to the cost of production functions of firms as "sub-optimal" use of financial statements as private economic goods. It is a response to "growth" requirements which have a moral/professional objective.[32] The "end" of regulated financial disclosure is not some instance of decision-making effectiveness, but a presentation which is iconic and collective in its own right.

Monetary Compensation and Uniform Marginal Utility

An issue of importance, given the preceding discussion, is to place into perspective some relevant problems which have been raised in accounting. It is stressed

here that the additivity of individual utilities in a before-the-event decision-making context need not capture the essence of Littleton's structure of professional practice.

Irrespective of the framework adopted, Littleton's very long-term view of the response of financial reporting to social change under historical continuity may justify use of an assumption of uniform marginal utilities across all participants. The idea is that, as a general rule, some fundamental concepts of interpersonal behavior may have survived for centuries in the face of economic and technological change and even of changes in political structure. That is, certain relevant ethical foundations may have spanned the centuries in which double-entry bookkeeping has flourished and might even, given Littleton's moral stance (Ref.9, ch.1), go back to biblical edicts on stewardship (cf. St. Matthew, ch.25). Another view could be that such long-lived customs and rules have survived because of inspired self-interest among business people and politicians.

Cost/benefit analysis addresses the creation of benefits net of social costs. If a number of people benefit from a service to the extent of say, $1 million, the fact that they together transfer $0.5 million to other members of society is a redistribution of the benefit, not a reduction of its amount in social terms. Conversely, if a subsidy is paid for a service from general revenues which benefits a specialized group, then under the Pareto principle there is no case for accepting a service that, in the absence of the subsidy, would be regarded as economically unsound. Such transfers in benefits depend upon whether the "social welfare function" is increased or decreased by adoption of the scheme as political valuation for the longer-term common good.

The utilitarian view is that the social welfare function is a norm of what should be, and this concept can be used to clarify the Littleton issue relating to compensation (Ref.9, p.95). Following Broome,[39] issues of monetary compensation can be addressed with respect to valuing a life which, like very long-run historical continuity, may be assumed for demonstration to be universally valuable. Of course, historically based explanatory statements need be neither strictly universal nor wholly statistical (Ref.17, pp.15–17) provided they guide continuity in a significant way.

Let $W = \sum_j Uj$

Where W is social welfare and Uj is the utility of the j^{th} individual. Uj is a function of the state of the world that is maximized under alternative choices (individualistic) as j's welfare. Government's assumed moral (right) task is to maximize W, the sum of the welfare of each person. Let Uj be a function of X, the complete state of the world except for money holdings, and also a function of mj, the amount of money owned by j. Thus

$$Uj = Uj(X, mj)$$

The present state is X^0 with money holdings m_1^0, m_2^0 ... A proposed financial reporting policy will bring about state X^1 with money holdings m_1^1, m_2^1... This is acceptable only if

$$\sum_j Uj(X^1,m^1j) \geq \sum_j Uj(X^0,m^0 j)$$

That is

$$\sum_j \Delta U_j \equiv \sum_j [Uj(X^1,m^1j) - Uj(X^0,m^0j)] \geq 0$$

Let m^cj be the amount of money that exactly compensates j for the change. That is,

$$Uj(X^1,m^1j-m^cj) = Uj(X^0,m^0j)$$

Then

$$\sum_j \Delta U_j \equiv \sum_j [U_j(X^1,m^1_j) - U_j(X^1,m^1_j-m^c_j)]$$

$$= \sum_j m^cjV^1_j$$

where v^1j is the average utility per dollar over the interval $(m^1_j-m^c_j,m^1_j)$. For small $m^c_jV^1_j$ may be regarded as the marginal utility per dollar. If V^1_j is assumed to be the same for all individuals, then

$$\sum_j \Delta Uj = V^1 \sum_j m^c_j \geq 0 \text{ if and only if } \sum_j m^c_j \geq 0$$

Thus the assumption of uniform marginal utilities across the set of individuals is sufficient to ensure that the utilitarian approach is equivalent to that of determining desirability by reference to aggregate compensation. Such a finding has meaning in the world of practice if shorter-term consequences are relinquished for very long-run edicts of continuity. In historical terms, these appear to reflect educational and moral issues which may constrain self-interest.

Welfare economists no longer generally agree that individuals are equally efficient in deriving satisfaction from money or that the marginal utility of money declines as income advances (Ref.40, p.55). Purchasing power denotes general freedoms in a market economy. Whether one seeks an optimizing social welfare function under utilitarianism in the very long-term or some less ambitious alternative, qualitative constraints on distribution need to be imposed over purchasing power *ex ante* if one is aiming at a degree of social responsibility. In Littleton's terms, managers are to be directed towards continuity through fair dealing and moral responsibility (Ref.9, p.17).

One form of control that has public consent at the moment is the need for the extent of revenue generation and the distribution of amounts of that revenue to be justified and disclosed in financial terms. As Littleton observed, the accounting academic can assist practitioners by observing and inducing relevant aspects of economic and statistical demonstrations and studies of the world, although these are not to remain policy impregnated by the value judgements or, perhaps more importantly, the time horizons of host disciplines. The exception is where a time

horizon, such as very long-run historical continuity, may be shown to reflect the actual focus in reality of professions in public practice. Pragmatic issues including the need for more effective information for *ex ante* decision-making should not, and perhaps will not, be permitted to disfigure the reporting icon, given its historical and moral foundations.

Conclusion

Although the portrayal of "situations" in the Dewey sense through accrual-based reporting may reveal philosophical strength as a social concept as well as historical realities tracing the evolution of professional public practice, Littleton could not confront a seemingly mundane but nevertheless basic condition for measurement itself. Subjectivity of valuation procedures and the economic instability after 1929 caused him to reject the need for consistency of magnitude in the measurement unit when used over time. This problem is not yet overcome, even assuming a value-free environment of measurement.

Demonstrations in this paper have tended to identify Littleton's structure as justifying the use of accrual accounting, if it is to be used at all, as a basis for stabilized or "purchasing power" financial statements. These might then be argued to provide the technological reflection of "income" measurement for the disclosure of distributional morality (equity) of funds flows among all affected parties. "Morality" or "profit" for Littleton and Dewey is an observable quality or cultural function of "growth"; which is subject to both efficiency and distributional welfare constraints (Ref.9, p.95). "Depreciation", being an expense rather than a loss, seems to be a recognition that a prepaid social transfer has now been consummated as a collective "good." This process justifies to a professional in public practice a periodic distribution (perhaps stabilized) from revenues (public sanction) to the reporting entity. The concept does not relate to valuation, market-based or otherwise.

Bedford and Ziegler[37] generously indicated those features of accounting which most felt the impact of Littleton's contributions to accounting thought:

(1) the inductive approach to the development of knowledge in accounting;
(2) the historical method of relating accounting practice to its social and economic environment;
(3) the development of general-purpose financial statements which permitted the initial development of an organized structure of accounting thought;
(4) the view of accounting theory construction as explanations of varying levels of validity of relations among concepts; and
(5) the comprehensive view of accounting as one common interrelated body of knowledge to be studied and examined as a single (whole) discipline.

If Littleton himself were free to provide a quotation from his writings which sums up his voluminous contributions over time to the body of knowledge, it might be found in the following sentence, which came very late in his long career:

"Being history, accounting must confine its data to a continuing prior life." (Ref.41, p.478).

An attempt has been made in this paper to set this postulate into the very long-term framework of perception which Littleton provided. His structure predicated the organization of accounting knowledge under conditions of social change. That is, he advocated compliance by professional public practitioners and also relevant support from at least some accounting theorists, to very long-term causes. These issues may direct the attention of researchers to professional practice and to the melding of induction, deduction and freely-sanctioned and evolving doctrine as an overall philosophy of measurement. This appears to have been Littleton's major priority for theoretical work (Ref.9, p.131), given that public practice use of accounting as the basis of financial reporting is seen to be an instrument of "common good" (p.17).

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Effect of FASB Statement No. 52 on Profitability Ratios

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Key words: Currency translation; FASB 52; Foreign subsidiary income; Income volatility; Multinational corporations

Abstract: *Multinational corporations have generally been found to exhibit a more volatile net income and a less volatile equity level after adopting FASB Statement No. 52. A stronger (weaker) dollar generally resulted in lower (higher) profitability ratios for most multinational corporations. The sensitivity of reported profitability to exchange rate movements has been exacerbated by Statement No. 52.*

Foreign subsidiaries of multinational corporations (MNCs) contribute to the earnings, assets and equity of their parent companies, yet the subsidiaries' income statement and balance sheet items, often expressed in local currencies, must be translated into US dollars before consolidation with the financial statements of the parent companies. Depending on the translation method used, Financial Accounting Standards Board (FASB) Statement No. 8 or No. 52, different accounting effects are expected to occur. The purpose of this study is to examine how the profitability measures of MNCs have been affected by FASB Statement No. 52 in comparison with Statement No. 8.

FASB Statement No. 8 was introduced in 1975 as a method of translating a foreign subsidiary's income statement and balance sheet items. Using a temporal method of translation, Statement No. 8 distinguished between past and future financial transactions. Under the temporal method, a foreign subsidiary's inventories and fixed assets (past transactions) are translated at historical exchange rates, whereas the subsidiary's receivables, payables, and other monetary items (future transactions) are translated at current exchange rates.

For reasons to be discussed, Statement No. 8 received extensive criticism for increasing the volatility of reported earnings and for failing to reflect the underlying economic reality of foreign operations. As a result, the FASB issued Statement No. 52 in December 1981 to replace Statement No. 8. (Major US firms with

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foreign subsidiaries were able to choose when to adopt Statement No. 52 as long as they did so between fiscal years 1981 and 1983 (See Ref. 1, p.128, for a study of managers' preference for foreign currency standards).

Statement No. 52 introduced the concept of a functional currency and distinguished between foreign subsidiaries that are independent cash-generating centers and those that are extensions of their parent company. For those subsidiaries that are simply extensions, the functional currency is the US dollar, and the translation process under Statement No. 52 remains essentially the same as under Statement No. 8.

For the independent subsidiaries, which are the subject of this study, the functional currency is the local currency or some currency other than the US dollar.[2] In the case of these subsidiaries, Statement No. 52 departs from the temporal method by using the "all-current" method. Under this method, all balance sheet items, except common equity, are translated at the current exchange rate. Income statement items are translated at the rate that prevailed when the revenue or expense was recognized, generally the weighted average exchange rate for the year.

Balance Sheet Effects

Under Statement No. 8 and a strong (weak) US dollar, cash and receivables were translated at a low (high) current exchange rate, whereas inventory and fixed assets were translated at a comparatively higher (lower) historical rate. Current liabilities as well as long-term debt were translated using the low (high) current method, whereas common equity alone was translated using a somewhat higher (lower) historical rate. The only balance sheet account that could absorb this translation imbalance was the retained earnings account. With a strong (weak) US dollar, retained earnings were often inflated (deflated) under Statement No. 8, as the translation effect on assets overrode the effect on liabilities and shareholders' equity.

Under Statement No. 52 and a strong (weak) US dollar, all balance sheet items except common equity are translated at a low (high) current exchange rate. Prior years accumulated common equity is translated at a comparatively high (low) historical rate, yielding a somewhat larger (smaller) liability and shareholders' equity total to be balanced by an equivalent asset total.[3] To absorb this translation imbalance, Statement No. 52 introduced a new equity account. Thus, with a strong (weak) US dollar, a modest negative (positive) equity adjustment should occur under Statement No. 52.

Comparing the balance sheet effects of Statement No. 52 with those of Statement No. 8, we expect Statement No. 52 to create greater volatility in shareholders' equity because of this equity adjustment.[4]

Income Statement Effects

Under Statement No. 8 and a strong (weak) US dollar, revenue and expenses were translated at a relatively low (high) weighted average exchange rate, reflecting the

market value of the US dollar. Nonmonetary cost of goods sold and depreciation were translated at a somewhat higher (lower) historical exchange rate. However, for the income statement's net profits to be compatible with the balance sheet's annual retained earnings, it was necessary to back into an exchange gain/loss income statement account. Thus, under Statement No. 8 and a strong (weak) US dollar, the subsidiary's income statement in all likelihood showed a significant currency exchange gain (loss).

Under Statement No. 52 and a strong (weak) US dollar, revenue, cost of goods sold, depreciation, and other expenses are all translated at a relatively low (high) weighted average exchange rate. As the balance sheet already contains an equity adjustment from the translation account, the balance sheet is compatible with the income statement without the latter showing a currency exchange gain (loss).

Comparing the income statement effects of Statement No. 8 with those of Statement No. 52, we expect Statement No 8 to have increased the volatility of net income for MNCs as a result of its inclusion of a translation gain/loss on a foreign subsidiary's income statement.

Criticism of Translation Methods

FASB statement No. 8 was criticized by many for increasing the volatility of reported earnings by showing translation gains and losses on the income statement. Recognizing this problem, the FASB stated: "Compatibility in terms of cash flow consequences is achieved if... the effect of rate changes that have only remote and uncertain implications for realization are excluded from determining net income for the period" (see Ref. 5, p.95). As FASB Statement No. 52 does not recognize translation gains and losses on the income statement, it should reduce the volatility of subsidiary earnings.

The Statement No. 8 pronouncement was also faulted for not reflecting the "underlying economic reality" of foreign operations. On this point, the FASB noted that "compatibility in terms of effect on equity is achieved, for example, if an exchange rate change that is favorable to an enterprise's exposed position produces an accounting result that increases equity" (see Ref. 5, p.95). The exposed position of an independent foreign subsidiary is most likely to be the local currency. With a strong (weak) US dollar we expect a decrease (increase) in the subsidiary's equity. By using the "all-current" method and reconciling any translation anomalies in owners' equity as "translation adjustments," Statement No. 52 should better reflect the "underlying economic reality" of a foreign subsidiary.

Statement No. 52 is not without its own problems, however. When translating the subsidiary's historical cost items at current exchange rates, Statement No. 52 yields a figure that is neither a meaningful representation of past cash flows nor a reliable description of future flows. Moreover, Statement No. 52 obscures the interpretation of translation effects by consolidating these meaningless balances with the parent company's balance sheets (see Ref. 4, p.67).

Research Objective

Writers discussing Statement No. 52 have covered a myriad of issues including inflation,[6] interest rates,[7] tax effect, shareholder value,[8] alternative translation methods,[9] and statement of changes in financial position.[10] In this paper, we examine the consensus that Statement No. 52, in comparison with No. 8, reduces the volatility of net income and increases the volatility of equity of MNCs' foreign subsidiaries.

Because Statement No. 52 affects the reported net income, total assets and equity of foreign subsidiaries, it can affect such financial performance ratios as return on assets (ROA), and return on equity (ROE) for MNCs. In the case of ROA, a strong (weak) US dollar should result in a lower (higher) net income and a lower (higher) total asset balance under Statement No. 52 than under No. 8. However, as both the numerator and denominator of the ROA ratio move in the same direction, the exchange rate effect *a priori* is indeterminate. Likewise, in the case of ROE, a strong (weak) US dollar should yield a lower (higher) net income and a lower (higher) equity balance under Statement No. 52 than under No. 8. Again, as the ROE's numerator and denominator move in the same direction, the exchange rate effect *a priori* is unpredictable.

Our objective is to determine through empirical testing how the volatility and translation exposure of MNC profitability ratios have been affected by Statement No. 52.

Data

To achieve our objective, we identified a sample of multinational corporations from the top 150 companies ranked in market value that appeared in the April 15, 1988, issue of *Business Week* (see Appendix). For consistency, completeness, and accuracy, the following criteria were applied during the selection process:

(1) the company had to be engaged in international business (most of the firms we chose were referred to in Moody's *Directory of Corporate Affiliations* as having foreign subsidiaries);
(2) the firm's financial data for the years 1977–1988 had to be readily available from annual reports;
(3) the functional currency of the company's subsidiary had to be the local currency or some currency other than the US dollar;
(4) the firm had to have adopted Statement No. 52 in fiscal year 1982 so that the comparative analysis would not be distorted by differences in time of adoption;
(5) the company's fiscal year had to end on or about December 31 to avoid a distortion due to timing, as described above.

Many MNCs had to be excluded because at least one of the selection criteria was not fulfilled. A partial list of reasons for excluding such firms follows:

(1) the company adopted Statement No. 52 in 1981 (Johnson & Johnson, Eli Lilly) or in 1983 (General Motors, Dow Chemicals);
(2) the time at which the firm adopted Statement No. 52 could not be determined (Sears Roebuck, Southern);
(3) the functional currency of the company's subsidiary was the US dollar (Texaco, Caterpillar);
(4) the firm's fiscal year did not end on or about December 31 (Hewlett Packard, Procter & Gamble).

For each of the companies included in the sample, the net income, total assets, and shareholders' equity was obtained for the years 1977–1987. This 11–year period divides into two approximately equal subperiods before and after the implementation of FASB Statement No. 52. The beginning of 1977 to the end of 1981 represents the "pre-period," and the beginning of 1982 to the end of 1987 constitutes the "post-period."

Net income levels were taken for each quarter, yielding a total of 44 observations for each of the 30 companies. Likewise, ROA and ROE ratios were obtained for each quarter, resulting in a total of 44 ROA and 44 ROE ratios for each of the 30 firms. The data for assets and equity were available only on an annual, not a quarterly basis, during the pre-period. Thus, to preserve consistency between the pre- and post-periods, the ROA and ROE ratios were estimated using the annual figures.

Comparing Volatility of Profits Before and After Statement No. 52

For each of the 30 firms in the sample, the following characteristics before and after the inception of FASB Statement No. 52 were assessed:

(a) the mean and volatility of quarterly net incomes,
(b) the mean and volatility of annual equity,
(c) the mean and volatility of the ROA, and
(d) the mean and volatility of the ROE.

Because many of the sample firms experienced grown since Statement No. 52, their average net income, annual asset, and equity accounts were generally increasing during the post-period. Thus, to assess the volatility of the above characteristics, the coefficient of variation (CV) was used.

Empirical Results

Of the 30 firms studied, seven exhibited less volatile net incomes and 23 demonstrated more volatile net incomes after the implementation of Statement No. 52. This outcome refutes the hypothesis that Statement No. 52 results in a

lower volatility of net income. Thus, it appears that the inclusion of exchange rate gains and losses on the income statement could have helped smooth earnings by offsetting unusually high or low levels. The deletion of exchange rate gains or losses since adoption of Statement No. 52 prevents such a smoothing effect.

With regard to common equity, 19 firms showed less volatile and 11 exhibited more volatile equity accounts after the adoption of Statement No. 52. This result runs counter to the expectation that Statement No. 52 adjustments to shareholders' equity causes more volatile equity accounts. Normal changes in equity (as retained earnings) may offset the direct translation adjustments to the common eqûity account.

The ROAs of 20 companies were more volatile and those of 10 were less volatile after adoption of Statement No. 52. In addition, the ROEs of 22 firms were more volatile and those of eight were less volatile since Statement No. 52. Both findings indicate a greater degree of sensitivity to external factors in the numerators and/or the denominators of these ratios, since Statement No. 52.

Regression Analysis

To assess the sensitivity of each financial ratio to two independent variables, regression analysis was performed on the ROA and ROE of each of the companies before and after adoption of Statement No. 52. An exchange rate index (ERI) was included to test how these financial ratios respond to exchange rate movements. In addition, an industry ratio corresponding to each company's Standard Industry Code (SIC) number was included to determine whether the financial ratios show sensitivity to domestic business cycles. The following regression model was applied to the portfolio of firms in the sample:

$$\text{PROA} = a_0 + a_1 (\text{PERI}) + a_2 (\text{PINROA})$$

where PROA is the quarterly percentage change in the ROA, PERI is the quarterly percentage change in the exchange rate index, and PINROA is the percentage change in the industry ROA ratio.

The value of Special Drawing Rights (SDR) (in dollars) was used as a proxy for the ERI for each quarter from beginning 1977 to year-end 1987. The SDR represents a five-currency unit of account, which rose in value to a high of $1.32438 in June 1980 when the US dollar was weak, and declined to a low of $0.98021 in December 1984 when the dollar was strong. A total of 44 SDR observations was compiled.

To assess the domestic industry effects for each firm, financial ratios corresponding to each company's SIC were taken from Robert Morris Associates (RMA) *Annual Statement Studies*. Many of the companies in the sample operated in business areas falling under several SIC numbers. In these cases, the first primary business code provided for the company by Moody's *Directory of Corporate Affiliations* for which a corresponding listing also appeared in the RMA Annual Statement Studies was used. To control for the effects of the domestic economy,

rations corresponding to medium-sized firms with $1 million–$10 million in sales were chosen from the *Annual Statement Studies*. Companies of this size were deemed unlikely to have foreign subsidiaries. For each of the 30 firms, industry ROA and industry ROE were compiled over the 44 quarters.

To examine the sensitivity of the 30 firms' ROAs and ROEs to the ERI and the industry ratio, the companies' responsiveness was measured in the aggregate. A composite industry ROA and ROE ratio was taken from a weighted average of the respective ROA and ROE ratios that corresponded to the various SIC numbers. For example, the SIC code 6711 applied to seven companies, whereas SIC 2731 referred to two firms. Accordingly, ROA and ROE ratios for SIC 6711 were counted seven times whereas those for SIC 2731 were included twice in the 30 ratio average.

The results from Table 1 illustrate that the industry ROA variable (PINROA) used to control for possible industry effects was not significant. The percentage change in the exchange rate index (PERI) showed no significant relationship with the percentage change in the ROA (PROA) in the period during use of Statement No. 8, but exhibited a significant positive relationship with the PROA after adoption of Statement No. 52. To explain this outcome, it may help to examine the SDR effects on the numerator and denominator of the ROA ratio before and after implementation of Statement No. 52

Table 1. Sensitivity of ROA to Exchange Rate Movements

	Before Statement No. 52		After Statement No. 52	
	Coefficient	Standard error	Coefficient	Standard error
PERI	–9.022	7.795	18.438[a]	3.866
PINRATIO	–8.859	5.556	–2.581	2.807
Intercept	0.339	0.233	0.067	0.175
R^2	0.2228	0.5241		

[a]Significant at the 0.01 level.

During the pre-period, while statement No. 8 was in effect, a foreign exchange rate movement, represented by the SDR in our study, affected the net income of a foreign subsidiary in two ways. The first was an effect on gross profits. As revenue was translated at a weighted average rate, and cost of goods sold was translated at a historical rate, the resulting profit increased (decreased) with an appreciation (depreciation) in the SDR. A rise in the SDR was consistent with a weak-dollar period. The second effect was that an increase (decrease) in the SDR caused an exchange rate loss (gain) on the income statement, offsetting the first effect. Similarly, total asset value remained fairly stable during this period despite SDR fluctuations, as inventories and fixed assets were translated at a historical rate. With an increase (decrease) in the SDR, only cash and accounts receivables appreciated (depreciated). Overall, it seems that value changes in net income and assets due to exchange rate movements either offset each other or were negligible under Statement No. 8.

Under FASB Statement No. 52, the positive relationship between the portfolio's ROA and the PERI suggests that either the net income of the portfolio was increasing and/or the aggregate assets were decreasing during weak-dollar periods. However, as subsidiary assets are translated at the current rate, they should increase during weak-dollar periods. A subsidiary's net income should increase with a fall in the US dollar, all things being equal. So for the aggregate ROA to have risen during these periods, net income must have been more sensitive than assets to exchange rate movements.

The sensitivity of the portfolio ROE to exchange rate movements before and after implementation of Statement No. 52 was assessed by replacing the PROA with the percentage change in ROE (PROE) in the regression model. The results, disclosed in Table 2, show no significant industry effect in either period. Whereas the relationship between the exchange rate index and the PROE was not significant before adoption of Statement No. 52, the relationship was significant and positive after its adoption. This result suggests that during the pre-period while Statement No. 8 was in effect, changes in net income and equity value due to exchange rate movements cancelled each other out. During the post-period, ROEs were favorably (unfavorably) affected by a weaker (stronger) dollar. Any increase (decrease) in reported equity resulting from the weaker dollar was more than offset by favorable (unfavorable) income effects.

Table 2. Sensitivity of ROE to Exchange Rate Movements

	Before Statement No. 52		After Statement No. 52	
	Coefficient	Standard error	Coefficient	Standard error
PERI	–5.103	5.56	18.840[a]	3.72
PINRATIO	–3.015	2.952	–4.065	2.337
Intercept	0.224	0.167	0.089	0.169
R^2	0.1219	0.5659		

[a]Significant at the 0.01 level.

Conclusion

The purpose of this study was to examine how profitability ratios of MNCs are affected by FASB Statement No. 52, which was introduced to correct some of the problems of its predecessor, Statement No. 8. Most of the corporations examined exhibited a higher volatility in net income and a lower volatility in equity after adopting Statement No. 52.

The portfolio ROA and ROE showed a positive and statistically significant relationship with PERI, under Statement No. 52, which suggests that a strong (weak) US dollar would lower (raise) the ROA and ROE ratios for most multinational firms. Thus, a corporation's financial performance ratios (ROA and ROE) are more sensitive to exchange rate movements under Statement No. 52 than they were under Statement No. 8. These results do not necessarily suggest that Statement No. 52 is ineffective in stabilizing performance measures, but simply

that profitability ratios are not insulated from exchange rate movements. An understanding of how these ratios are affected can allow for a more appropriate interpretation of changing profitability ratios over time.

Appendix

The following table shows the selected sample of 30 firms as well as one of their primary Standard Industry Codes (SIC).

IBM	1	3573	Computing equipment
Exxon	2	6711	Real estate holding companies
Philip Morris	6	6711	Real estate holding companies
Ford Motor	7	3711	Motor vehicles
Mobil	12	6711	Real estate holding companies
Coca Cola	17	2086	Bottled and canned soft drinks
Minn. Ming & Mfg.	19	3861	Photo equipment and supplies
RJR Nabisco	27	2021	Dairy products
Schlumberger	38	3823	Instruments for measurement
American Int'l Group	40	6711	Real estate holding companies
PepsiCo	42	2086	Bottled and canned soft drinks
McDonald's	44	5812	Restaurants – fast foods
Waste Management	47	6711	Real estate holding companies
Tenneco	63	1311	Crude petroleum and natural gas
Citicorp	65	6711	Real estate holding companies
Monsanto	69	2841	Soap and other
Schering-Plough	70	2834	Drugs and medicines
J.P. Morgan	71	6711	Real estate holding companies
Baxter Travenol Labs	74	2834	Drugs and medicines
Time	88	2731	Books, publishing, and printing
Warner-Lambert	89	2834	Drugs and medicines
Chrysler	90	3711	Motor vehicles
NCR	95	3573	Computing equipment
Raytheon	9	3662	Radio and transmitting devices
General RE	101	6411	Insurance agents and brokers
Time Mirror	102	2731	Books, publishing, and printing
American General	108	6411	Insurance agents and brokers
Borden	128	2021	Dairy products
Phillips Petroleum	129	1311	Crude petroleum and natural gas
CPC International	131	2046	Prepared feeds for animal and poultry

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The Statement of Cash Flows – An Analysis of Translation and Remeasurement Techniques for Foreign Subsidiaries

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Key words: FASB 52; FASB 95; Foreign currency translations; Foreign subsidiaries; Statement of cash flows

Abstract: *The new FASB Statement No. 95 not only discusses the revised format of the statement of cash flows, but also specifically addresses the issue of foreign currency translation in the new statement format. The changes required from FASB No. 52, Foreign Currency Translation, will significantly reduce the reporting flexibility previously allowed. This paper analyzes the calculations required to prepare a statement of cash flows for foreign subsidiaries whose financial statements will be combined with those of a US parent company. Two approaches are possible, either the translation or the remeasurement method. The different calculations required under the two procedures are examined and explained by comprehensive illustrations.*

FASB Statement No. 52, *Foreign Currency Translation,*[1] (issued in 1981) requires business enterprises to disclose material exchange rate effects arising from foreign currency translation in the income statement, balance sheet, and statement of changes in financial position of foreign entities.

In 1987, FASB Statement No. 95, *The Statement of Cash Flows,*[2] specifically addressed the issue of foreign currency translation in the new statement of cash flows which replaced the statement of changes in financial position. In contrast to Statement No. 52, which permitted a variety of formats for the statement of changes, Statement No. 95 has significantly reduced the reporting flexibility previously allowed.

This paper analyzes the calculations required to prepare a statement of cash flows for foreign entities whose financial statements will be combined with those of a US parent. Foreign entity statements are converted to US dollars under either the translation or the remeasurement method. The two approaches require significantly different techniques to produce a statement of cash flows for a foreign entity.

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Before examining cash flow calculations in detail, however, this paper briefly reviews relevant provisions of FASB Statements Nos. 52 and 95, and summarizes the essential differences between the translation and remeasurement approaches. The different calculations required to prepare the statement of cash flows under the two conversion techniques are examined by means of a comprehensive illustration. Dual worksheets and supporting calculations demonstrate the preparation of financial statements of a foreign entity before their combination with the statements of a US parent company.

Relevant Provisions of FASB Statements Nos. 52 and 95

FASB Statement No. 52 introduced the concept of a functional currency. The functional currency of a foreign subsidiary is defined as the currency of the primary economic environment in which the entity operates; normally it is the currency in which the entity generates and expends cash.[3] In some circumstances, a foreign entity's functional currency may be the local currency. For others, the US dollar or even another foreign currency may be designated as the functional currency.

The financial statements of foreign operations may be converted using one of two conversion methods. If the functional currency is the US dollar, the statements are converted using the remeasurement method. If a local currency is identified as the functional currency, the statements are converted using the translation method.

Under FASB Statement No. 95, The Statement of Cash Flows, which became effective in mid-1988, each foreign entity must continue to identify its functional currency.

If the US dollar is the functional currency, foreign entities whose accounting records are not maintained in US dollars must use the remeasurement approach to convert their statement of cash flows to the dollar. If, on the other hand, the functional currency is the local currency, foreign entities must use the translation approach to convert their statements.

The Board also specified disclosure standards for material exchange rate effects arising from foreign operations[4] and narrowed the reporting flexibility permitted under earlier pronouncements.

Before issuing Statement No. 95, the Board evaluated other possible approaches that might be adopted to report exchange rate effects in the statement of cash flows. After extensive debate, the FASB reached the following conclusions:

(1) Exchange rate effects of items other than cash are not investing, financing, or operating activities and should not be presented on a statement of cash flows. This conclusion would require any exchange rate effects to be reported in a separate category on the cash flow statement.

(2) The statement's focus on cash flows is obtained by reporting the currency equivalent of local currency cash flows.

(3) A reconciliation of asset and liability accounts in successive balance sheets is not a purpose of the statement of cash flows.[5]

In summary, the Board's focus on cash flows requires reporting the currency equivalent of local currency cash flows, and it is the foundation of the requirements of FASB Statement No. 95. For this reason, the statement of cash flows of foreign entities must report operating, investing, and financing activities at the historical exchange rate in effect when each cash transaction occurred (a weighted average rate is permitted for transactions occurring throughout the period).

Essentials of Translation and Remeasurement

Under Statement No. 52, companies may adopt either the translation or the remeasurement method to prepare financial statements for foreign operations. Although most companies adopt one approach or the other, some multinational enterprises use both methods. For example, a US parent corporation may adopt translation for one or more foreign subsidiaries and remeasurement for other foreign subsidiaries, depending upon the economic environment of each subsidiary.

The remeasurement approach retains the dollar perspective (temporal method), which was required before FASB Statement No. 52, and reports financial results presuming all transactions initially have been recorded in dollars, not in a local (foreign) currency.

In contrast, the translation approach retains the local currency perspective (current rate method), and produces financial statements presuming foreign operations have initially been recorded in a foreign currency. The translation method uses current rates (or weighted average rates, if appropriate) to convert the financial statements of foreign entities.

Table 1. Summary of Exchange Rates Required Under Remeasurement and Translation

Financial Statements	Remeasurement rate	Translation rate
Income Statement		
Revenues	Average	Average
Expenses	Average and historical	Average
Exchange gain or loss	Reported	Not reported
Retained earnings statement		
January 1 balance	Carried forward from previous year	Carried forward from previous year
Net income	Carried forward	Carried forward (average)
Dividends	Declaration date	Declaration date
December 31 balance	Summation	Summation
Balance sheet		
Assets	Current and historical	Current
Liabilities	Current and historical	Current
Equities	Historical	Historical
Retained earnings	Carried forward	Carried forward
Exchange gain or loss	Not reported	Reported
Statement of cash flows		
Operating activities	Transaction date (average)	Transaction date (average)
Investing activities	Transaction date	Transaction date
Financing activities	Transaction date	Transaction date
Exchange rate effect	Balancing amount	Balancing amount

The cash flows from operating activities section in the statement of cash flows requires substantially different calculations under the translation and remeasurement methods. Before examining these differences more closely, it is useful to review the conversion rates required under remeasurement and translation. They are summarized in Table 1.

Although preserving the statement's focus on cash flows, reporting the currency equivalent of local currency cash flows required by Statement No. 95 introduces several technical complexities. These complexities arise because the statement of cash flows will not reconcile the change in the translated (or remeasured) cash account on two successive balance sheets when exchange rate changes have occurred between the two reporting dates.

The Statement of Cash Flows – Translation Versus Remeasurement

Whether an enterprise adopts the remeasurement or the translation approach for its foreign operations, the change in cash on the statement of cash flows is the difference between the ending cash balance converted at the end of period exchange rate and the beginning cash balance converted at the beginning of period exchange rate.

Under Statement No. 95, cash flows from operating, investing, and financing activities report cash effects on the specific transaction dates. Transactions are converted at historical exchange rates on the transaction dates, with a weighted average rate permitted from transactions occurring throughout the period.[6]

After considering both the direct and indirect methods for reporting cash flows from operating activities in a statement of cash flows, the FASB recommended the direct method. However, in addition to reporting major classes of operating cash receipts and cash payments, the direct method also requires a supporting schedule reconciling net income to cash flows from operations. Essentially, the details reported under the indirect method also must be reported under the direct method.

Both the translation and the remeasurement approaches produce identical dollar amounts for cash flows from investing and financing activities. It should be noted that the cash flows from investing activities and financing activities are identical in the statements of cash flows presented in Tables AI–T (translation method) and AI–R (remeasurement) method in the Appendix.

Net cash flows from operating activities also are identical under translation and remeasurement. However, because different rates are used to convert the financial statements under the two approaches, the reconciliations of net income to cash flows under the two methods are different. The computations required to obtain the converted cash flows from operating activities are explained in detail below both for translation and remeasurement. The reconciliations of net income to cash flows from operating activities are presented as separate schedules in Tables AI–T and AI–R in the Appendix, and also are reproduced in Table 2.

Under the translation approach, the elements of cash flows from operating activities are translated using a weighted average exchange rate. In contrast, under

Table 2. Reconciliation of Net Income to Cash Flows from Operating Activities

Translation Approach					
Net income	60 lcu		0.65	$ 39.00	
Depreciation expense	40		0.65	19.5	
Loss on sale of land	5		0.65	3.25	
Gain on retirement of debt	(15)		0.65	(9.75)	
Decrease in inventories	10		0.65	6.50	
Increase in accounts receivable	(20)		0.65	(13.00)	
Increase in accounts payable	10		0.65	6.50	
Cash flows from operating activities	80 lcu			$ 52.00	
Remeasurement approach					
Net income (from worksheet)	60 lcu			$ 33.50	
Depreciation expense	30		0.60	18.00	
Remeasurement loss				12.80	
Loss on sale of land	5		(a)	1.50	
Gain on retirement of debt	(15)		(b)	(6.90)	
Decrease in inventories	10		(c)	(0.30)	
Increase in accounts receivable	(20)		0.65	(13.00)	
Increase in accounts payable	10		0.65	6.50	
Cash flows from operating activities	80 lcu			$ 52.00	
(a) Cash	40		0.64	25.60	
Loss	5			1.40	
Land		45	0.60		27.00
(b) Bonds payable	50		0.60	30.00	
Cash		35	0.66		23.10
Gain		15			6.90
(c) (100 x 0.6) – (90 x 0.67) (4th quarter average)					

Exchange rates

Date	$/lcu	Date	$/lcu
January 1, 1989	0.60	October 1, 1989	0.66
April 1, 1989	0.62	December 31, 1989	0.68
July 1, 1989	0.64	Average, 1989	0.65
		4th quarter average	0.67

lcu = Local currency unit.

remeasurement, most elements (beginning with net income) use different exchange rates and produce different dollar amounts from those produced under translation. It should be noted that the final net cash flow from operating activities is identical both in foreign currency and in dollars under the two approaches.

A clearer understanding of these differences can be obtained by comparing the converted income statement portions of the worksheets presented in Tables AIII–T and AIII–R in the Appendix. Under translation, net income of $39.00 was obtained by converting all revenue and expense items at average exchange rates. The reconciliation of net income to cash flow from operations in Table 2 requires adjustments for non-cash items reflected in accrual net income, nonoperating gains and losses, and changes in working capital items. To be consistent, these adjustments are translated at average rates.

A different reconciliation is required under the remeasurement approach. The remeasured income statement portion of the worksheet presented in Table AIII–R reports net income of $33.50, which differs from the results under translation.

Under remeasurement, appropriate historical rates are used to convert revenue and expense items. Remeasurement gain or loss (a noncash item) appears as a balancing amount to obtain the required net income derived in the statement of retained earnings.

The remeasured reconciliation of net income to cash flows from operating activities in Table 2 also requires adjustments to net income for noncash items, nonoperating gains and losses and changes in working capital accounts. However, to be consistent with the remeasurement approach, appropriate historical rates must be applied to remeasure these items.

In Table 2, it should be noted that under the remeasurement approach, depreciation (at historical rates) is added to net income. Also, the remeasurement gain or loss is removed from net income because, like depreciation, it is a noncash item. In this example, a \$12.80 remeasurement loss is added to net income to obtain cash flow from operating activities of \$52.00.

The necessary conversions of nonoperating gains and losses are illustrated in Table 2. No specific exchange rates are applied to the gain and loss because these items reflect balancing amounts. For example, entry (a) reflects the sale of land at a loss of 5 lcu. Under remeasurement, cash and land are remeasured at their respective historical rates. The \$1.40 loss is a balancing amount which combines both the loss and exchange rate changes between the date the land was acquired and sold.

Similarly, the retirement of debt in entry (b) produced a gain of 15 lcu. Bonds payable is remeasured at the last balance sheet date (the date of acquisition in this case), to write off the exact amount in US dollars. Cash is remeasured at the exchange rate on the transaction date. The balancing amount is the reported gain of \$6.90, reflecting both the gain on retirement and exchange rate changes.

The change in inventories also is remeasured at historical rates. Item (c) reports the difference between beginning and ending inventories remeasured at appropriate historical rates. In this example, the lcu decrease in inventory converts to an increase in US dollars due to the increase in the exchange rate during the year.

Changes in current monetary items are remeasured at average rates assuming uniform changes throughout the year. The use of average rates is consistent with remeasurement procedures for monetary revenue and expense items.

To summarize, the reconciliations in Table 2 produce identical net amounts for translation and remeasurement in both lcu and US dollars. Because cash (a monetary item) is both translated and remeasured using current rates, identical amounts for the change in cash should follow. However, different rates from those used under translation have been applied to remeasure the adjustments. These differences arose because the procedures used to prepare the income statements differed under translation and remeasurement. The following differences should be noted:

(1) Net income is different under the two procedures.

(2) An exchange gain or loss is a component of remeasured net income but is not part of translated net income.

(3) Noncash expenses, nonoperating gains and losses, and changes in nonmonetary items are translated at average rates but are remeasured at historical rates.

The Comprehensive Illustration

Comprehensive illustrations of both the translation and remeasurement approaches for preparing a full set of financial statements are presented in the Appendix. These examples illustrate in more detail the techniques required to prepare a statement of cash flows for a foreign entity under remeasurement and translation. For comparative purposes, both procedures use the same illustrative data. The analysis above has considered portions of the comprehensive illustration to emphasize the essential differences between the two approaches and to reconcile the net change in cash flows from operating activities under translation and remeasurement.

Conclusion

The primary objective of this paper has been to assist accountants in the preparation of foreign entity statements of cash flows before consolidation with statements of US entities. Specific procedures under both the translation and remeasurement methods were presented.

The paper introduced a comprehensive example to illustrate the significant differences required to prepare the statement of cash flows under the two methods. The paper demonstrates that, despite differences in reconciling details, the final cash flows from operating activities are identical under remeasurement and translation.

Appendix. The Comprehensive Illustration

This example illustrates the detailed techniques required to prepare a statement of cash flows under translation and remeasurement. For comparative purposes, both conversion procedures use the same illustrative data, which are summarized below. It is assumed that the following transactions occurred during 1989.

(1) The foreign subsidiary was purchased on January 1.

(2) Revenues, purchases and operating expenses were earned and incurred uniformly throughout the year.

(3) April 1 transactions:
Notes payable of 90 lcu were retired.
Land was purchased for 60 lcu.

July 1 transactions:
Notes payable were issued for 85 lcu.
Common stock was issued for 25 lcu.
Land was sold for 40 lcu, producing a loss of 5 lcu.

October 1 transactions:
Bonds payable of 50 lcu were retired, producing a gain of 15 lcu.
Dividends of 10 lcu were declared and paid (for simplicity, the same exchange rate for declaration and payment dates is assumed).

(4) Relevant exchange rates for the year are shown in Table 2 and Table AIII–T of this Appendix.

Statements of cash flows for the Carter Company for the year ended December 31, 1989, are presented in Tables AI–T and AI–R. In Table AI–T, the translation approach is applied because the functional currency is the local currency. In Table AI–R, the US dollar is the functional currency and remeasurement is the conversion approach.

Table AI–T and AI–R are identical except for the reconciliation of net income to cash flows from operating activities. Conversion techniques under each procedure can be analyzed together with the supporting data and calculations illustrated in the text. Under the direct method of converting cash flows from operating activities, all cash receipts and payments are converted at average rates as these transactions occurred throughout the year.

Cash flows from investing and financing activities are converted at appropriate historical rates. On a statement of cash flows, the exchange rate in effect on each transaction date must be applied. (Compare the rates applied with the transaction dates from the illustrative data.)

The change in cash is obtained by taking the difference between the December 31 rate and the January 1 cash amount at the January 1 rate. This amount is computed as follows:

Cash, December 31	85 lcu x 0.68 =	$57.80
Cash, January 1	50 lcu x 0.60 =	$30.00
Increase in cash		$27.80

These computations are identical under both the translation and remeasurement approaches.

The exchange rate effect of $2.50 is reported immediately above the increase in cash under both approaches. It is a balancing amount that is mathematically necessary to complete the statement of cash flows. It should be noted that amounts for cash flows from operating, investing, and financing activities as well as the change in cash are identical in US dollars under both translation and remeasurement. Therefore, the exchange rate effect also is identical.

The reason for an exchange rate effect may not be readily apparent. A statement of cash flows reconciles changes in balance sheet accounts from one period to the next. However, the exchange rates used for translating and remeasuring balance sheet items (and for remeasuring income statement items) differ from the exchange rates used on the cash flow statement. For this reason, changes in exchange rates during a period will produce an exchange rate effect.

Table AII presents an income statement, statement of retained earnings, and balance sheet for the year ended 1989 in lcu. From these financial statements, worksheets for translation and remeasurement are illustrated in Tables AIII–T and AIII–R, respectively.

The differences in the two procedures are noteworthy. In Table AIII–T, all income statement items are translated at average rates. Further, the reconciliation for translating cash flow from operations in Table AI–T consistently uses average rates to convert adjustments to net income.

In the retained earnings statement in Table AIII–T, the January 1 balance is carried forward in US dollars from the previous period (date of acquisition in this case). Net income is carried forward (at an average rate), whereas dividends are translated at the historical rate on the date of declaration. The December 31 retained earnings balance then is carried forward to the balance sheet.

In Table AIII–T, all assets and liabilities are translated at current rates, whereas capital stock accounts are translated at historical rates. As the retained earnings balance is carried forward, no specific exchange rate is assigned. Finally, a balancing amount (the cumulative translation adjustment) is required to maintain the accounting equation.

These translation procedures are in contrast to those applied under remeasurement (Table AIII–R), where balance sheet items are converted first. It should be noted that the monetary assets and liabilities are remeasured at current rates whereas nonmonetary assets and liabilities and capital stock accounts are converted at historical rates. Retained earnings on December 31 is a balancing amount in the balance sheet.

Table AI–T
Carter Company; Statement of Cash Flows For the Year Ended December 31, 1989 (Translation)

	Local currency units	Exchange rate	US dollars
Cash flows from operating activities			
Receipts from customers	280 lcu	0.65	$182.00
Payments to suppliers	(150)	0.65	(97.50)
Payments for operating expenses	(50)	0.65	(32.50)
Cash flows from operating activities	80 lcu	0.65	$ 52.00
Cash flows from investing activities			
Sale of land	40 lcu	0.64	$ 25.60
Purchase of land	(60)	0.62	(37.20)
Total investing activities	(20) lcu		$(11.60)
Cash flows from financing activities			
Retirement of notes payable	(90) lcu	0.62	$(55.80)
Issuance of notes payable	85	0.64	54.40
Retirement of long-term debt	(35)	0.66	(23.10)
Issuance of common stock	25	0.64	16.00
Payment of dividends	(10)	0.66	(6.60)
Total financing activities	(25) lcu		$(15.10)
Exchange rate effect			2.50
Increase in cash	35 lcu		$27.80
Cash, January 1	50 lcu	0.60	$30.00
Cash, December 31	85 lcu	0.68	$57.80
Reconciliation of net income to cash flows from operating activities			
Net income	60 lcu	0.65	$ 39.00
Depreciation expense	30	0.65	19.50
Loss on sale of land	5	0.65	3.25
Gain on retirement of debt	(15)	0.65	(9.75)
Decrease in inventories	10	0.65	6.50
Increase in accounts receivable	(20)	0.65	(13.00)
Increase in accounts payable	10	0.65	6.50
Cash flows from operating activities	80 lcu		$52.00

Next, the December 31 retained earnings balance is transferred from the balance sheet back to the statement of retained earnings, the January 1 balance is carried forward from the previous period (date of acquisition in this case), and dividends are remeasured at historical rates. At this point, net income of $33.50 becomes a balancing amount in the retained earnings statement, and net income then is transferred back to the income statement.

Revenues and expenses are remeasured at appropriate historical rates in the income statement. The difference between remeasured revenues and expenses and final net income produces a remeasurement gain or loss. This balancing amount is a $12.80 loss in this example. This income statement can be compared with the

Table AI–R
Carter Company; Statement of Cash Flows For the Year Ended December 31, 1989 (Remeasurement)

	Local currency units		Exchange rate	US dollars	
Cash flows from operating activities					
Receipts from customers	280 lcu		0.65	$182.00	
Payments to suppliers	(150)		0.65	(97.50)	
Payments for operating expenses	(50)		0.65	(32.50)	
Cash flows from operating activities	80 lcu		0.65	$ 52.00	
Cash flows from investing activities					
Sale of land	40 lcu		0.64	$ 25.60	
Purchase of land	(60)		0.62	(37.20)	
Total investing ctivities	(20) lcu			$(11.60)	
Cash flows from financing activities					
Retirement of notes payable	(90) lcu		0.62	$(55.80)	
Issuance of notes payable	85		0.64	54.40	
Retirement of long-term debt	(35)		0.66	(23.10)	
Issuance of common stock	25		0.64	16.00	
Payment of dividends	(10)		0.66	(6.60)	
Total financing activities	(25) lcu			$(15.10)	
Exchange rate effect				2.50	
Increase in cash	35 lcu			$27.80	
Cash, January 1	50 lcu		0.60	$30.00	
Cash, December 31	85 lcu		0.68	$57.80	
Reconciliation of net income to cash flows from operating activities					
Net income	60 lcu			$ 33.50	
Depreciation expense	30		0.60	18.00	
Remeasurement loss				12.80	
Loss on sale of land	5		(a)	1.40	
Gain on retirement of debt	(15)		(b)	(6.90)	
Decrease in inventories	10		(c)	(0.30)	
Increase in accounts receivable	(20)		0.65	(13.00)	
Increase in accounts payable	10		0.65	6.50	
Cash flows from operating activities	80 lcu			$52.00	
(a) Cash	40		0.64	25.60	
Loss	5			1.40	
Land		45	0.60		27.00
(b) Bonds payable	50		0.60	30.00	
Cash		35	0.66		23.10
Gain		15			6.90
(c) (100 x 0.6) – (90 x 0.67) (4th quarter average)					

reconciliation in Table AI–R for remeasurement to observe the consistent application of historical rates. Also, again it should be noted that the remeasurement loss of $12.80 is added to net income as it is a noncash item similar to depreciation.

Table AII

Carter Company; Statements of Income and Retained Earnings For the Year Ended December 31, 1989

Sales		300 lcu
Cost of goods sold:		
Inventory, January 1	100 lcu	
Purchases	160	
Goods available for sale	260	
Inventory, December 31	(90)	
Cost of goods sold		(170)
Gross profit		130
Depreciation expense		(30)
Other operating expenses		(50)
Operating income		50
Other revenues and expenses:		
Gain on bond retirement		15
Loss on sale of land		(5)
Net income		60 lcu
Retained earnings, January 1		170
Dividends declared		(10)
Retained earnings, December 31		220 lcu

Carter Company; Comparative Balance Sheets, December 31, 1988 and 1989

	1988		1989	
Assets				
Cash		50 lcu		85 lcu
Accounts receivable		60		80
Inventory		100		90
Property, plant, and equipment	300 lcu		300 lcu	
Less: Accumulated depreciation	(120)	180	(150)	150
Land		410		425
Total assets		800 lcu		830 lcu
Liabilities and equities				
Accounts payable		40 lcu		50 lcu
Notes payable (short-term)		90		85
Bonds payable		200		150
Common stock, no par		300		325
Retained earnings		170		220
Total liabilities and equities		800 lcu		830 lcu

Table AIII–T
Carter Company; Worksheet for Translation, December 31, 1989

	Local currency units	Exchange rate	US dollars
Statements of income and retained earnings			
Sales	300	0.65	195.00
Gain on bond retirement	15	0.65	9.75
Inventory, December 31	90	0.65	58.50
Total credits	405		263.25
Inventory, January 1	100	0.65	65.00
Purchases	160	0.65	104.00
Operating expenses	50	0.65	32.50
Depreciation expense	30	0.65	19.50
Loss on sale of land	5	0.65	3.25
Total debits	345		224.65
Net income	60	0.65	39.00
Retained earnings, January 1	170	0.60	102.00
Net income	60	0.65	39.00
Dividends declared	(10)	0.66	(6.60)
Retained earnings, December 31	220		134.40
Balance sheet			
Cash	85	0.68	57.80
Accounts receivable	80	0.68	54.40
Inventory	90	0.68	61.20
Property, plant, and equipment	300	0.68	204.00
Less: Accumulated depreciation	(150)	0.68	(102.00)
Land	425	0.68	289.00
Total assets	830		564.40
Accounts payable	50	0.68	34.00
Notes payable	85	0.68	57.80
Bonds payable	150	0.68	102.00
Common stock	300	0.60	180.00
	25	0.64	16.00
Retained earnings	220		134.40
Cumulative translation adjustment			40.20
Total liabilities and equities	830		564.40

Exchange Rates

Date	\$/lcu	Date	\$/lcu
January 1, 1987	0.60	October 1, 1987	0.66
April 1, 1987	0.62	December 31, 1987	0.68
July 1, 1987	0.64	Average 1987	0.65
		4th quarter average	0.67

Table AIII–R
Carter Company; Worksheet for Remeasurement, December 31, 1989

	Local currency units	Exchange rate	US dollars
Statements of income and retained earnings			
Sales	300	0.65	195.00
Gain on bond retirement	15		6.90
Inventory, December 31	90	0.67	60.30
Total credits	405		262.20
Inventory, January 1	100	0.60	60.00
Purchases	160	0.65	104.00
Operating expenses	50	0.65	32.50
Depreciation expense	30	0.60	18.00
Loss on sale of land	5		1.40
Total debits	345		215.90
Revenues minus expenses	60		46.30
Remeasurement loss			12.80
Net income	60		33.50
Retained earnings, January 1	170	0.60	102.00
Net income	60		33.50
Dividends declared	(10)	0.66	(6.60)
Retained earnings, December 31	220		128.90
Balance sheet			
Cash	85	0.68	57.80
Accounts receivable	80	0.68	54.40
Inventory	90	0.67	60.30
Property, plant, and equipment	300	0.60	180.00
Less: Accumulated depreciation	(150)	0.60	(90.00)
Land	365	0.60	219.00
	60	0.62	37.20
Total assets	830		518.70
Accounts payable	50	0.68	34.00
Notes payable	85	0.68	57.80
Bonds payable	150	0.68	102.00
Common stock	300	0.60	180.00
	25	0.64	16.00
Retained earnings	220		128.90
Total liabilities and equities	830		518.70

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Impact of SFAS No. 52 on Performance Measures of Multinationals

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Key words: Impact of foreign currency translation statement (SFAS 52); Performance evaluation of subsidiaries; External currency reporting

Abstract: *This study uses a survey instrument to investigate whether multinational companies (MNCs) have taken advantage of the provisions of SFAS No. 52 to develop accurate and reliable performance evaluation techniques for their foreign subsidiaries and the managers of those subsidiaries. The results of this study indicate that the issuance and implementation of SFAS No. 52 altered neither MNCs' external currency reporting nor their choice of performance evaluation measures. The results also suggest that most sample MNCs placed heavy emphasis on segmented profit and budgeted profit as a performance measurement and less emphasis on a simplified approach such as return on investment and residual income.*

In December 1981 the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 52,[1] which expanded the scope of foreign currency translation by considering the economic effects of a change in exchange rates on an entity's cash flows and by identifying a foreign entity's functional currency. Under SFAS No. 52 different translation methods can be used for different economic situations. SFAS No. 52 facilitated the evaluation of a company's performance because in most cases translation gains or losses are not included in a determination of net income. These adjustments are deferred and included in the equity section in the financial statements of the reporting enterprise.

The rapid growth of foreign operations and investments has exerted pressure on managers of MNCs to develop sound performance evaluation systems for foreign subsidiaries, and to ensure that the objectives of the entity are being accomplished. Performance evaluation requires accounting data, and these data are directly affected by exchange rate movements: a profit may change to a loss when translated into headquarters' currency. SFAS No. 52 was intended to compensate for uncontrollable exchange rate volatility.

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This study determines whether MNCs have taken advantage of the provisions of SFAS No. 52 to develop accurate, reliable performance evaluation techniques for their foreign subsidiaries and the managers of those subsidiaries.

Managerial Accounting Problems of MNCs

The major problem facing many MNCs is how to develop a system of management control appropriate for foreign operations at all levels. As every MNC operates in several political, cultural, and regulatory environments, two special problems emerge:

(1) On the one hand, the home country wants control over MNC's resources sent abroad, to ensure efficiency and profit; on the other hand, the host nation wishes to control MNC's operations, to serve the interests of its national goals. This conflict of interest is exacerbated by the presence of growing nationalism and the absence of generally accepted international laws governing the operations of MNCs and their relations with host countries.

(2) Each nation has a different regulatory environment. MNCs must, therefore, conduct business in a variety of legal environments, with their headquarters subjected to the legal jurisdiction of the home state, and the subsidiaries under the control of the laws of the host country (Committee on International Accounting[2]).

Therefore, performance evaluation under these circumstances is difficult at best.

Performance Evaluation

Performance evaluation entails the establishment of an adequate and responsible accounting system to measure the effectiveness, efficiency, and economy of the management or division activities. This requires a system for establishing goals and standards, gathering information on the results of operations, disclosing deviations from standards, determining the cause and effect of those deviations, and taking corrective actions.

The accounting requirement for performance evaluation in MNCs is that records must be kept in local currencies. However, in many cases, the desire of headquarters' management, creditors, tax officials, regulatory authorities, and shareholders may be to have a single currency for all company operations, regardless of their locations. Translation of accounting records of foreign operations from the local currencies into the currency of the parent provides a means to measure the relative contributions and commitments of various areas. Therefore, measuring the results of foreign operations in terms of home currency is useful in performance evaluation. However, other data of a nonaccounting nature, such as growth trends, market potentials, and productivity, are also important.

Purpose

Given the assertions that the adoption of SFAS No. 52 will produce less distortion in reported net income of the foreign subsidiaries, this study intends to measure the relative importance of the seven accounting measures used most widely to evaluate the subsidiaries' performance. Moreover, the study investigates the impact of SFAS No. 52 on the ranking of these measures.

The seven most widely used accounting measures considered in this study are:

(1) return on investment (ROI);
(2) return on equity;
(3) residual income;
(4) segmented profit margin;
(5) cash flow potential;
(6) budget compared with actual sales; and
(7) budget compared with actual profit.

Many accountants today are dissatisfied with most systems currently used for subsidiary evaluation. They believe that these systems are inaccurate in measuring the performance of MNCs because of their narrowness. Robbins and Stobaugh[3] found that 95 percent of MNCs evaluated their foreign operations using exactly the same basis as their domestic subsidiaries, and also concluded that, in almost every case, a form of RIO was used as the basic measure of performance. Twelve years later, Abdallah and Keller[4] reached the same conclusions on MNCs' performance evaluation. Abdallah[5] argued that these seven measures do not take into consideration the environmental factors of foreign subsidiaries. He presented a model that responds to the environmental factors and their interactions. The suggested model measures performance of foreign subsidiaries after considering and isolating the impact of noncontrollable environmental factors.

Research Methodology

A preliminary survey questionnaire consisting of three sections was developed and pretested using executives of Detroit area MNCs. The final survey instrument was mailed to international business executives of 400 MNCs selected from *Fortune*'s 1985 list of the 1000 largest US companies. These companies were cross-listed in Dun and Bradstreet's *Principal International Business World Marketing Directory*.[6] Completed questionnaires were obtained from 109 MNCs; therefore, the response rate was 27 percent. All responses were tested for non-response bias using an accumulative ANOVA test and found to be free of non-response bias.

The questions in the survey were yes/no questions and interval scales with three intervals. A three-point scale was used with "3" signifying the most popular (primary) technique used in the performance evaluation, "2" indicating the secondary technique, and "1" indicating the least popular technique used. Tables 1 – 5 provide the results of the survey in percentages.

Survey Results

The results discussed in this section are a combination of the tabulated responses to the series of questions and the financial executives' comments on several of those questions.

Background Information

The sample companies were large corporations with substantial foreign operations. Table 1 shows that 74.3 percent of the respondents reported that their annual sales exceeded $500 million, and 43.1 percent reported more than $1 billion total annual sales. The ratio of foreign sales to total sales indicates that 77.1 percent of the companies had foreign sales that accounted for more than 20 percent of their total sales. Only 22.9 percent of respondents reported that their foreign sales were below 10 percent of the total sales.

Table 1. Background Information

Description	Responses	Percentage of Responses
Sales volume		
Below $500 million	28	25.7
$500 million – $1 billion	21	19.3
$1 billion – $5 billion	47	43.1
Above $5 billion	13	11.9
	109	100
Foreign sales/total sales		
Below 10 percent	25	22.9
20-25 percent	42	38.5
25-40 percent	29	26.6
Above 40 percent	13	12.0
	109	100
Breakdown of respondents		
Controllers of international operations		36
Treasurer of international operations		11
Manager of financial reporting/corporate accounting		22
Managers of international financial analysis		22
Accountant director responsible for translation		9
		100

The respondents were asked to indicate their occupations and organization levels to determine whether their responses reflected company-wide situations. The breakdown of respondents as presented in Table 1 provides a reasonable basis to assume that the questionnaire was answered by well-informed personnel.

Performance Measure Criteria

To evaluate the impact of SFAS No. 52 on performance measurements, the respondents were asked to identify the primary, secondary and the least popular techniques they use in measuring the performance of subsidiaries' operations/ activities both before and after the issuance of SFAS No. 52. The results in Table 2 reflect the importance respondents placed on using multiple financial criteria.

All respondents indicated they used more than one measure for performance evaluation, and on average four measures were cited. Segmented profit, budgeted profit compared with actual profit, and return on investment (ROI) are the most frequently used measures in performance evaluation. These results are consistent with the findings of the earlier study by Abdallah and Keller.[4] However, the present sample of 109 MNCs is much larger than their sample of 64 companies. Moreover, in this study performance evaluation techniques used before and after SFAS No. 52 have been compared. More than 60 percent of the respondents indicated that profit and budgeted profit compared with actual profit are the primary techniques used to evaluate their subsidiaries' performance. Approximately 30 percent of the respondents indicated that these two measures were either their least popular techniques or were not used to evaluate subsidiaries' performance.

Other financial measures commonly used were budgeted sales compared with actual sales, cash flow potential, return on equity, and residual income. Only 2.7 percent of the respondents considered residual income as their primary technique. The US decision-makers, in contrast to the West Germans and Japanese, generally view any investment evaluations as rate of return decisions.[7] Previous research has shown that most MNCs oversimplify the importance of the performance evaluation and a majority of them rely on ROI to evaluate their subsidiaries' performance. See, for example, McInnes,[8] Robbins et al.,[3] and Kim and Crick,[9] who concluded that ROI was cited by a majority of surveyed firms as the most useful evaluation criterion. The results of this study reveal that the popularity of return on investment has declined. The empirical results presented in Table 2 show that only 45 percent of the respondents indicated that ROI is a primary technique used in evaluating subsidiaries' performance. Approximately 44 percent reported that ROI is either the least popular technique or not used in their performance evaluation. The results reveal that because of the limitations of ROI, many MNCs now rely heavily on sales or profit budgets for performance evaluation. This suggests that the budgeting process establishes a set of attainable goals for individual subsidiaries while taking into consideration the environmental factors. The main problem with using a budget for performance evaluation is that a conservative manager of a subsidiary may initially set the budget at a low level with very accurate prediction. In this case, achieving the budget may not be congruent with the company's long-term goals, because the subsidiary's performance should have been much better.

This study also investigated the impact of SFAS No. 52 on the application of these performance measurement techniques. Table 2 indicates that SFAS No. 52 did not have significant impact on the choice of performance evaluation measures

Table 2. Ranking of Meausres used for Performance Evaluation Before and After SFAS No. 52 (as percentages)

	Profit	Budget/ Actual Profit	ROI	Budget/ Actual Sales	Cash Flow Potential	Return on Equity	Residual Income
Panel 1 – Subsidiary operation/activity before SFAS No. 52							
Primary technique	67.2	61.3	45.3	37.7	23.5	22.6	2.7
Secondary technique	2.8	11.3	11.3	28.3	26.4	15.1	8.5
Least popular	8.5	6.6	14.1	10.4	10.4	13.2	16.9
Do not use	21.7	20.8	29.2	23.6	39.6	49.1	71.7
	100	100	100	100	100	100	100
After SFAS No. 52							
Primary technique	65.1	62.3	48.2	38.7	31.2	20.7	4.7
Secondary technique	2.8	13.2	10.4	29.2	23.6	18.9	11.4
Least popular	12.3	6.6	15.2	9.5	9.4	11.3	14.1
Do not use	19.8	17.9	26.4	22.6	35.8	49.1	69.8
	100	100	100	100	100	100	100
Panel 2 – Subsidiary manager before SFAS No. 52							
Primary technique	64.2	40.6	38.7	40.6	13.2	17.0	3.7
Secondary technique	3.8	24.6	12.2	24.6	22.6	9.5	7.5
Least popular	8.4	11.4	17.0	11.4	13.2	16.0	15.0
Do not use	23.6	23.6	32.1	23.6	26.9	57.5	73.6
Total	100	100	100	100	100	100	100
After SFAS No. 52							
Primary technique	64.2	63.3	41.5	43.4	20.7	17.0	2.8
Secondary technique	4.7	13.2	13.3	25.4	20.7	13.2	10.4
Least popular	9.3	6.6	15.1	9.4	14.2	14.1	13.2
Do not use	21.7	17.0	30.2	21.7	44.3	55.7	73.6
Total	100	100	100	100	100	100	100

for the surveyed MNCs. In a separate question specifically asking the respondents whether the issuance of SFAS No. 52 has altered their external currency reporting, 74 percent responded that it did not.

The respondents who used ROI were asked to indicate how their target/budget ROI ratios are set. Table 3 shows that approximately 40 percent of the respondents indicated that their ROI is established by the expected profit potential and each subsidiary determines its own target ROI. Nearly 12 percent reported that every subsidiary is expected to earn the same ROI. Thirteen percent indicated that their subsidiaries are not given a target ROI and they are not constrained to use the same ROI in establishing budgeting and financial planning techniques.

Table 3. Setting a Subsidiary's Target/Budget ROI (percentages)

No target ROI are set for subsidiaries	13
Same target ROI for every subsidiary	12
Different ROI based on profit potential for each subsidiary	40
Other or no response	35
	100

Managers' Performance versus Subsidiaries' Performance

Most MNCs assign their best managers to their weak subsidiaries. Thus a distinction must be made between the performance of a manager as a professional executive and the performance of the subsidiary itself. However, a comparison of Panels 1 and 2 of Table 2 reveals that the same financial measures were used to measure the foreign subsidiary and foreign manager. Accordingly, there is a need to develop a separate technique of evaluating managers based solely on controllable factors. Rewards such as promotions and bonuses are often affected by performance reports; individual managers may act differently when their performance is measured by controllable factors.

Currency Fluctuations and Performance Evaluation

The internal and external stability of a country's currency affects performance measurement of overseas operations. The use of more than one currency by MNCs requires the headquarters to decide the extent to which the subsidiary is to be held accountable for changes in foreign exchange rates and resulting translation losses. One way to cope with this problem is to have foreign subsidiaries measured in terms of the foreign currency, especially those which have experienced a devaluation or revaluation. These issues were investigated in the last part of the questionnaire.

The respondents were asked to identify the parties responsible for anticipating/protecting against foreign currency fluctuations both before and after the issuance of SFAS No. 52. Table 4 shows a split response regarding this responsibility. However, the majority cited area treasurer and corporate treasurer followed by home office personnel as the primarily responsible groups. Some of the respondents indicated that their firm had established a foreign exchange committee to shoulder this responsibility. Table 4 also shows that the issuance of SFAS No. 52 did not significantly shift the responsibility of anticipating/protecting against foreign currency fluctuations.

Table 4. Party Responsible for Anticipating/Protection against Foreign Currency Fluctuation

Party responsible	Before SFAS 52	After SFAS 52
Foreign subsidiary manager	32 (30.2)*	31 (29.2)
Foreign regional manager	5 (4.7)	7 (6.6)
Home office personnel	42 (39.6)	44 (41.5)
Area treasurer and corporate treasurer	49 (46.2)	54 (50.9)
Area financial officer	13 (12.3)	14 (13.2)

[a] Numbers in parenthesis represent the percentage of total firms responding.

When a subsidiary experiences a devaluation or revaluation, headquarters must decide if the results should be judged in terms of the local currency or in terms of US dollars. This also raises the question of whether the headquarters should use different internal performance evaluation techniques for domestic operations from those used for foreign operations.

The respondents were first asked to identify the bases which their company uses to compute foreign subsidiary executives' bonuses. Panel A of Table 5 shows that the majority of surveyed firms use net income adjusted for exchange gains/losses as a basis for computing executives' bonuses. Then the respondents were asked to indicate whether they use different internal performance evaluation techniques for foreign operations. As Panel B of Table 5 shows, a vast majority (85 percent) indicated that different internal performance evaluation techniques were not used for domestic and foreign operations. The practice noted by earlier researchers[2,3] (Dearden)[10], apparently continues: MNCs largely use the same methods of control and performance evaluation for both domestic and foreign operations. However, several respondents commented that although distinct techniques were not used, their firm reported variances caused by the use of a different currency for foreign operation.

Table 5. Performance Evaluation and Currency Fluctuation (percentages)

Panel A – Bases for executives' bonuses	
1 – Net income before exchange gains/losses	31
2 – Net income after exchange gains/losses	57
3 – Other basis	12
	100
Panel B – Performance evaluation techniques, domestic versus foreign operations	
1 – Use the same techniques	85
2 – Use different techniques	15
	100
Panel C – Types of financial statement used to evaluate performace	
1 – Financial statement in local currency	65
2 – Financial statement in U.S. dollars	35
	100

Panel C of Table 5 shows that 65 percent of the respondents used financial statements presented in local currency for performance evaluation, whereas 35 percent used financial statements presented in US dollars. Some of the respondents noted in their comments that "local currency statements in highly inflationary countries are less meaningful." Others indicated that they "use both financial statements in local currency and US dollars": local currency statements are used to evaluate performance relative to budget, and US dollar reports are used to evaluate performance in other areas.

Summary

As the number of foreign operations has grown, the development and administration of a sound performance evaluation system has become a major issue for managers of MNCs. An effective performance evaluation technique can be used in decisions on the proper allocation of resources to subsidiaries, assignment of managers to foreign divisions, and their salaries, promotions, and bonuses, as well as their future assignments and status. The following observations and conclusions can be drawn from our survey of 109 MNCs.

(1) Most MNCs reported that the corporate treasurer should be responsible for anticipating as well as protecting the company against currency fluctuation. Headquarters management must determine the extent to which the foreign subsidiaries are responsible for and can control foreign-exchange fluctuation. Management should attempt to minimize distortions in performance evaluation caused by using inappropriate translation procedures.

(2) Over 80 percent of surveyed MNCs used the same budgeting and financial planning as well as performance evaluation techniques for both domestic and foreign subsidiaries. As foreign subsidiaries are normally not isolated from their local political, cultural, social, economic, legal and educational constraints, these constraints should be considered in evaluating their performance. If environmental factors affecting MNCs are not given proper consideration, any performance evaluation will be meaningless and, accordingly, "static" will be introduced into the system.

(3) A majority of respondents indicated that the issuance and implementation of SFAS No. 52 altered neither their external currency reporting nor their choice of performance evaluation measures. Performance evaluation of MNCs was unaffected by the choice of functional currency (e.g., local currency versus US dollars). Indeed, the cash flow potential of foreign subsidiaries is the same regardless of the inclusion of translation gains or losses in the net income or in the equity accounts.

(4) Almost all surveyed MNCs used more than one criterion to evaluate operational activities of both foreign divisions and their managers. Segmented profit, budgeted profit compared with actual profit, and ROI are the measures used most frequently in performance evaluation.

(5) Most sampled MNCs used the same performance measurement techniques in evaluating both managers and foreign divisions. Performance evaluation of managers should be distinguished from performance measurement of foreign divisions. Thus, there is an urgent need to develop a separate technique of evaluating managers based solely on controllable factors.

Conclusions

The ability to develop and administer an effective method of assessing performance of foreign operations is essential because it judges the success of existing

operations and identifies inefficient operations. There is no universal objective technique or measure that can be used to evaluate performance of all subsidiaries. It appears that proper performance measurement techniques to evaluate MNCs' foreign subsidiaries and their managers have not yet been developed. An adequate performance evaluation system should take into consideration the environmental factors affecting the internal accountability of foreign subsidiaries and their managers. Such a system should also incorporate both quantitative and qualitative variables, each assigned appropriate weights in differing circumstances.

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Auditing in China: Historical Perspective and Current Developments

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Key words: Auditing organizational structure; Auditor's independence and legal authorities in China; Historical development; New audit regulations; Social audit unit

Abstract: *To contribute to the movement towards the harmonization of auditing standards and practices internationally, this paper describes the contents of the new "Audit Regulations of the People's Republic of China," which became effective on January 1, 1989. In addition, the historical perspective of auditing in China and the implications of the new Regulations are discussed. In addition, auditing-related problems which are currently encountered in China are summarized. These problems, if they are not resolved, would restrict the development of auditing in China to meet international standards.*

Introduction

In the past decade, with implementation of the economic structure reform in the People's Republic of China (PRC), auditing has begun to play a very important role in the new socioeconomic environment. Enthoven[1] in his review of the study *Accounting and Auditing in the People's Republic of China,* stated that "auditing under the Current Economic Structure Reform has become a necessity to see that the policies of opening to the outside world and stimulation of the economy are carried out." Huang[2] in his study provided an excellent description of the organizational structure of the auditing profession, the types of audit work, and auditing standards and procedures in China. However, those descriptions were primarily based on the 1985 statute, "Tentative Regulations on Auditing Practice of the State Council," which was superseded as of October 21, 1988. In its place, new Audit Regulations[3] of the People's Republic of China were approved by the

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Chinese Government and became effective on January 1, 1989. Through an update of Huang's study, the primary objective of this paper is to discuss the contents of this most recent Audit Regulation and its implications on the auditing profession in China to provide a better understanding of current developments.

The remainder of the paper is organized as follows. First, a brief review is given of the historical development of auditing in China, as an aid in understanding the current developments. The highlights of the recently approved Auditing Regulations of the People's Republic of China are then summarized, and the impacts and implications of these new Regulations on the organizational structures of auditing and its related functions are described. Finally, the conclusions of the paper are presented.

Historical Development

The history of auditing in China can be traced back for 3000 years. During the Zhou Dynasty (circa 11th century–256 B.C.), historical records reveal in detail the beginning of the establishment of the auditing profession. The records indicate that the ministry of finance of the government at that time had already stationed auditing officials in various districts to audit the revenues and expenditures reported by district governors. Subsequently, during the Qin Dynasty (221–207 B.C.) and the Han Dynasty (206 B.C.–220 A.D.), auditing regulations were included in the legal systems. In the Tang Dynasty (618–907), the ancient Chinese civilization reached its zenith because of economic prosperity and enlightened policies. During this time, auditing was very much emphasized by the central government. The principle of separating the auditing functions from the accounting functions was first emphasized and applied in this period. As a result, the role of auditing was no longer under the authority of the ministry of finance. Instead, a department of auditing was established and placed under the jurisdiction of the ministry of justice. The present Chinese expression for auditing, "shen-ji" ("shen" means examination and "ji" means accounting and finance), was first initiated in the Song Dynasty (960–1279). In comparison to the aforementioned dynasties, the latest three dynasties, the Yuan (1271–1368), the Ming (1368–1644) and the Qing (1644–1911), did not pay much attention to auditing functions and activities. During the last three dynasties, the department of auditing was sometimes placed under the jurisdiction of the ministry of justice and sometimes under the authority of the ministry of finance.

Before the 1911 Revolution, China had experienced a feudalistic society for more than 3000 years. During that time, primary auditing activities were related to governmental units. Governmental auditing practice flourished whenever the central government's control of economical and political developments was strong and retrogressed when it was lessened. Consequently, it is not surprising that auditing in China did not develop significantly during that long historical period.

The 1911 Revolution brought Western sciences, technology, and culture to China. Western auditing theories and practices, with accounting theories and practices, were adopted by the Chinese. During that period, from the Northern

Warlords Government (1912–1927) to the Nationalist Government (1912–1949), governmental auditing units were either under the direct jurisdiction of the President or under a supervisory institution. During this period, the Law of Auditing was issued and revised five times. Even with all these efforts, Chinese auditing did not develop as quickly as desired, because of the instability of the national political structure.

Since the 1949 Revolution, substantial economic developments have been achieved by China. Despite great setbacks caused by some political movements, such as the Cultural Revolution (1966–1976) and the Great-Leap-Forward Movement (1958–1961), modern China established a comprehensive industrial structure. All business enterprises were organized in a rigidly centralized control system following the economic structure pattern of the Soviet Union. As more than 80% of the state revenue came from the profit remitted by state-operated business enterprises, three forms of supervision were established to exercise control over these enterprises:

(1) direct supervision exercised by the governmental unit directly superior to the particular enterprise;
(2) political movements[4] launched to remove corruption and waste; and
(3) financial supervision exercised by the Ministry of Finance to audit state-operated enterprises.

During that period, given that operations were controlled directly by the central government and profit was not emphasized, auditing was not required in many situations and hence played a very limited role.

Since 1979, with the economic structure reform, auditing has been emphasized for the following two reasons. First, the relationship between the state-operated enterprises and the central administration has relaxed. Many state-operated enterprises became 'independent' and were able to control their own operations. Second, there was a change in the incentive system used by these enterprises. They were evaluated based on their profit performance and they were able to retain some profit in their enterprises.

The following actions taken since 1979, indicate that China has formally recognized the importance of auditing. For the first time, an auditing body was established according to the revised 1982 Constitution of the People's Republic of China.[5] In August 1983, the first Auditor General to head the State Auditing Office, was appointed by the National People's Congress. Subsequently, in September, auditing offices at the State, provincial, and local levels were established. In August 1985, the State Council approved the "Tentative Regulations on Auditing Practice" which discussed the organization and the functions of auditing. In October and December 1985, the Auditing Procedures and the Regulations on Internal Auditing were issued by the State Auditing Office. In June 1987, the State Council issued the Tentative Regulation on the Punishment for the Violation of Financial Laws and Disciplines. Finally, on October 21, 1988, a set of new "Audit Regulations of the PRC" was approved by the State Council This new set of Audit Regulations replaced the 1985 Tentative Regulations on

Auditing Practice and became effective on January 1, 1989. The following section briefly describes and summarizes the important aspects of these new Regulations.

Highlights of the Audit Regulations of the PRC

The new Audit Regulations cover several aspects of auditing in China; namely, the organizational structures, responsibilities, and authorities of the governmental auditing departments and the auditors, the audit functions and procedures, the role and responsibilities of the internal audit, the role and the responsibilities of the social audit, and the legal authority of the auditing department. Overall, this new set of Regulations has a wider scope than the 1985 Tentative Regulations on Auditing Practice. For example, the section on the social audit and the section on legal obligations are new. The basic descriptions of the new law are very similar to that of the 1985 Regulations.

Huang provides an excellent discussion and summaries of these various aspects. Only those regulations relating to the two new sections and those regulations which modify the existing auditing structures and practices due to the new Regulations will be described.

(1) Regulation no. 4: Any audit bureau which is subject to dual leadership of its local government and its superior audit bureau should follow only the direction of its superior audit bureau on any audit-related matters and jobs.

(2) Regulation no. 5: Within the scope of governmental auditing and the needs of those governmental units or enterprises which do not have audit bureau's representatives, the audit bureau can establish internal audit departments or can assign auditors to perform internal audit functions in those governmental units or enterprises.

(3) Regulation no. 7: The State Council establishes the Audit Administration, which is the country's highest audit establishment and is directly under the leadership of the Premier of the State Council. The Audit Administration is to organize and direct the nation's auditing works and is responsible for all audit-related matters.

(4) Regulation no. 9: According to the needs of auditing, the audit bureau can establish standing agents at key locations or enterprises to perform audits and supervising on its behalf.

(5) Regulation no. 14: For each audit bureau, the scope of auditing depends on the national financial structure, the audited unit's financial condition and its financial relationship within the structure. A higher-ranked audit bureau can delegate a lower-ranked audit bureau to perform those auditing tasks which are within the scope of auditing. At the same time, the higher-ranked audit bureau can also perform directly important audits on behalf of the lower-ranked audit bureau. Within the scope of audit, the audit bureau can also delegate the internal audit department or the social audit units to perform the audit on its behalf.

(6) Chapter 7 consists of four regulations on Social Audit. These regulations specify that the social audit units, which are independent business units, can engage in public account verifications and consulting services. These units should charge fees for their services, should be financially independent and should pay taxes.

To establish a social audit unit, approval must be obtained from either the Audit Administration or the provincial or the municipality audit bureau. Once approved, the social audit unit should register with the local commerce administration department and obtain a license to practice.

The social audit unit can be hired by governmental agencies, business enterprises, or an individual client to perform the following tasks:

(i) to audit and to verify revenue and expenditure items;

(ii) to obtain evidence relating to violations of financial and economic laws;

(iii) to examine and to verify annually the amount of registered capital;

(iv) to create accounting records, to design financial accounting information systems, and to provide consulting services on matters relating to accounting, finance, taxation, and management;

(v) to train auditing, finance, and accounting personnel.

When involved in the audit of a corporation with foreign investment, the social audit unit should perform its duties according to the rules specified in the "Regulations on Certified Public Accountants in the People's Republic of China."

Any information obtained by the social audit unit should remain confidential. Finally, the social audit units should be under the management and direction of the audit bureau. For any audit performed on behalf of the audit bureau, the audit reports should be submitted to the relevant audit bureau for evaluation and decision.

(7) Chapter 8 has four regulations on legal responsibilities. The audit bureau has the authority to issue notices of warning, to publicize violations, to impose monetary penalties, and to assign authority to the relevant department to implement administrative punishment if the audited unit or any responsible persons of the audited unit has taken one of the following actions:

(i) refused to provide the necessary documents, accounting records and reports, and evidence;

(ii) obstructed the auditor's performance of the audit;

(iii) falsified the records and concealed the truth;

(iv) refused to implement the audit recommendations and decisions;

(v) assaulted or took actions of revenge against the auditing personnel.

On the other hand, the audit bureau can impose a monetary penalty and can order other necessary administrative punishment on the audit personnel if they

(i) misused their positions to receive personal profit or favors;

(ii) were involved in falsifying records or were corrupt;
(iii) neglected their jobs, which caused great damage to the audit unit and the country;
(iv) revealed national secrets.

If any unit or person who has violated one of the above regulations does not agree with the penalty imposed, an appeal to a higher bureau or department is possible.

Finally, the audit bureau can have the court take legal actions against those who have seriously violated the above regulations.

Implications of the New Audit Regulations

This section discusses the implications and impact of the new Audit Regulations with respect to the following four aspects: (1) strengthening the line supervision of the auditing organizational structure; (2) improving the auditor's independence; (3) encouraging the creation of social audit units; and (4) entrusting the governmental auditing departments with legal authority.

Strengthening the Line Supervision of the Auditing Organizational Structure

In China, in addition to the Premier, there are several vice-premiers who have various ministries and departments under their direct control. Instead of placing the Audit Administration under one of the vice-premiers, the new Regulations (no. 7) specifically state that it is placed under the direct leadership of the Premier. This is to emphasize the importance and the independence of the Audit Administration.

As for the dual leadership[6] problem encountered by the audit bureaux established at various governmental levels, the new Regulations (no. 4) emphasize that the leadership of the Audit Administration or the higher-level audit bureau should be observed when auditing matters are concerned. This new regulation clearly specifies the primary and secondary leadership roles of the higher-level audit bureau and the local government office with respect to a given local audit bureau. Thus, the new Regulations streamline the governmental auditing responsibility organizational structure, from the Premier to the Audit Administration to the audit bureaux at the various governmental levels.

Improving the Auditor's Independence

With the new organizational structure as described above, the auditor's independence would be improved. In addition, there are three other approved Regulations (nos. 5, 9 and 14) that would further improve auditing independence.

First, the audit bureaux are now permitted by the new Regulations to establish an internal audit department or standing agency in some government units of

enterprises to perform audits on their behalf. This will correct the auditing independence problem previously encountered by internal auditors. In the past, various ministries or large government-owned enterprises had their own internal audit departments. Given that these internal audit departments served the particular ministry or enterprise, conflicts existed between the internal audit department and the management of the enterprise or ministry. Such conflict could affect the independence of the internal audit department. Under the new Regulations, the internal audit departments or any other audit agents can now be under the direct supervision of the Audit Administration or the audit bureau.

Second, the new Regulations allow the higher-ranked audit bureau to perform audits on behalf of those lower-ranked audit bureaux which are under its control. In other words, if the local audit bureau is unable to perform the task because of conflicts of interest with the local government, it can receive help from its superior audit bureau. This change will reduce conflicts and strengthen auditing independence.

Encouraging the Establishment of Social Audit Units

The 1985 Regulations do not mention social audit practice. In the new Regulations, an entire chapter is devoted to the discussion of social audit. This indicates that the Government has recognized the existing lack of qualified audit personnel and the need to have private, non-governmental audit personnel to participate in accounting and auditing activities. The word "social" in Chinese usually refers to things that do not pertain to state-run organizations. Social auditing, therefore, refers to auditing activities executed by private or semiprivate accounting and auditing firms. These firms have been established since private enterprises were encouraged by the new national economic policy. They are mostly managed by experienced retired accountants. By the end of 1987, there were 480 firms with approximately 4000 accountants; two-thirds of them were certified (evaluated and approved by either the Ministry of Finance or a provincial department of public finance) accountants or assistant accountants[7].

Chapter 7 of the new Regulations clearly specifies the role and responsibilities of social audit. Two observations can be made.

First, although the social audit unit is supposed to be a private organization, it is not completely 'independent' from the government audit structure. As specified in the Regulations (no. 33), the social audit unit has to receive management and business-related directions from the audit bureau. In fact, the social audit units have so far only undertaken auditing work assigned by the governmental audit bureaux. By reference to the reason for the creation of the social audit units, one can understand the existing situation. When enterprises with foreign investment were established in China, these firms did not want the existing governmental audit bureau to perform the audit. Consequently, social audit units which consisted primarily of personnel who were either officers of the ministry of finance, or accounting professors and researchers, were established to meet the needs of such enterprises. The personnel of the social audit units all hold part-time positions in these units. Thus, these units are actually semi-governmental agencies.

Second, according to the new Regulations, it seems that China is encouraging the establishment of private accounting and auditing firms. One can then expect that more certified public accounting (CPA) firms similar to those in the United States will soon appear in China. However, there are two major impediments to this development.

(1) Because of the lack of salary and pension security (i.e., health insurance and retirement benefits), most qualified personnel are unwilling to forfeit their secure full-time governmental positions to engage in the self-financed risky private practices. Chinese officials and professionals are accustomed to guaranteed social benefits being provided by the Government. As long as there are no established systems of private health insurance and retirement pensions, these people will only be willing to perform the social audit function on a part-time basis.

(2) Given that all of the business received by a social audit unit is referred by the governmental audit bureaux, it would be very difficult for a unit to survive based solely on the professional engagements it would be able to solicit. The referred business would depend significantly on the social auditor's relationship with officials of government audit bureaux. Furthermore, under the new Regulations (no. 9), the government audit bureaux can establish standing agencies or units to help them perform these tasks. Thus, it would be more likely in the future that most of the auditing will be performed directly by the governmental audit bureaux and their established agents.

Entrusting The Governmental Audit Departments with Legal Authority

The new Regulations have provided the governmental audit departments with some legal authority to assess penalties on the unit or individuals audited and audit personnel. This again strengthens the power and position of the governmental audit departments. However, this set of regulations on auditors' legal authority indirectly reveals the weakness of the legal system in China, i.e., for the defending party, the only appeal is to the higher-ranked audit bureau, which is within the auditing organizational structure. In other words, the defending party cannot appeal the decision to the judicial courts. The individual does not have the same legal recourse as the accused for a civil offense. Consequently, the audit department will never have to be a "defender" in the judicial courts.

Summary and Conclusions

Governmental auditing in China has been in existence for 3000 years. In the past, it was institutionalised either under the control of the ministry of finance or a part of the judicial system. Since 1989, governmental auditing is under the direct supervision of the Premier of the State Council and is recognized as an independent department. The new "Auditing Regulations of the People's Republic

of China," which took effect on January 1, 1989, will cause substantial changes in the auditing profession in China. As a result of the new regulations, the governmental auditing organizational structure is being streamlined. The new structure clearly delineates the lines of authority and leadership. Auditing independence in China is being improved and strengthened. The power and legal authority of the audit departments are established, and the significance of the role of the social audit is emphasized.

The substantial amount of authority and responsibility the Regulations have given to the government audit departments, however, may cause some concern. The changes will improve auditing independence, but they will also extend the influence of the audit departments and indirectly increase the Government's control. Further, the lack of protection one has from the legal system under the new regulations may create some chaos and injustice.

Finally, it is questionable whether the several auditing-related problems currently encountered in China will be completely resolved by the approved new Regulations. Examples of these problems are:

(1) Should the audit department perform economic effectiveness audits of business enterprises which use government capital to invest? Generally, the objective of such an audit is to make certain that the enterprise is achieving its target profit. Instead of using an audit to monitor the progress, probably a more effective method is to use some economic incentives. No alternative approaches to the economic effectiveness audit were mentioned in the new Regulations.

(2) What should be the contents and procedures of the management contract responsibility audit? Under the new economic reform program, the management responsibility contract system was implemented for business enterprises. Under this system, the management of these special enterprises is responsible to meet the profit quota. If the actual profit is greater than the profit quota, the enterprise keeps the excess for the enterprise's development and employees' bonuses. Consequently, fraud may be committed by an enterprise to conceal facts and to falsify records to indicate that the profit quota was realized. The new regulations specify the punishment for such actions but do not state how such an audit should be performed.

(3) How should the problem of inadequately qualified audit personnel be solved? Currently, there are approximately 900 000 state-operated enterprises with approximately 60 000 000 employees. The number of auditing personnel engaged in state auditing is approximately 50 000. Compared with the number of enterprises, the number of auditing personnel is far from adequate. Furthermore, the qualifications of some of these persons are questionable. They are not required to pass a public qualifying examination to obtain certification. In addition, as most Chinese universities do not have an accounting program in their curriculum, the training provided is from either commerce schools or vocational schools. The new set of regulations does not specify what the qualifications of the auditor should be nor does is suggest an approach to solve the problem of personnel shortage.

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2. H.Q. Huang, "Auditing," *Accounting and Auditing in the People's Republic of China* (joint research study by Shanghai University of Finance and Economics and Center for International Accounting Development, The University of Texas at Dallas, 1987) 53–73.
3. Shanghai Audit Bureau, "Audit Regulations of the People's Republic of China," *Shanghai Internal Auditing* (December 1988) 1–4.
4. Two movements were launched, the Movement Against the Three Evils (i.e., corruption, waste and bureaucracy) in 1951–1952 and the "Four Clean-ups" Movement in 1963–1966.
5. Article 91 of the 1982 Constitution reads: "The State Council establishes an auditing body to supervise through auditing the revenue and expenditure of all departments under the State Council and of the local governments at different levels, and those of the state financial and monetary organizations and of enterprises and undertakings. Under the direction of the Premier of the State Council, the auditing body independently exercises its power to supervise through auditing in accordance with the law, subject to no interference by other administration organization or any public organization or individual."
6. The dual leadership situation was established according to Article 109 of the 1982 Constitution, which stated: "Local auditing bodies at different levels independently exercise their power to supervise through auditing in accordance with the law and are responsible to the people's government at the corresponding level and to the auditing body at next higher level." Because of the dual leadership, auditors of local bureaux have a tendency to prevent thorough financial audits of local government so as to avoid conflicts of interest with the local government officials who determine the auditors' promotion or salary increment.
7. These statistics were obtained from the speech, entitled "Sum Up Our Experience, Make Persistent Efforts, Striving For More Development in Social Auditing," delivered by Jin-xin Luo at a seminar organized by the State Auditing Office to the directors of the provincial auditing bureaux in April 1988, published in *Chinese Auditing,* No. 6, 1988.

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Book Reviews

Rechnungslegung, Prüfung, Wirtschaftsrecht und Steuern in den USA *edited by Erik Sonnemann.* *Gabler, Wiesbaden, 1989, 369 pp, ISBN 3 409 13502 2.*

The title of this book in German may be translated as "Accounting, Auditing, Business Law, and Taxes in the United States." The book is intended for West German professionals concerned with those topics and interested in subsidiaries of West German companies in the United States and US subsidiaries in West Germany. Thus it addresses a readership that comprises not only public accountants, tax consultants, and lawyers, but also businessmen who already have investments or are planning investments or acquisitions in the United States.

The book's contents are based on a lecture series entitled, "Law Accounting, Taxes and Auditing in the United States," which was sponsored by the University of Michigan Alumni Club of West Germany in collaboration with the Faculty of Economics and Law of the University of the Saarland. Four chapters parallel the topics in the title. Each chapter includes a series of articles, most written by West German accountants, lawyers, and academicians. Two contributions are by US academicians.

The first chapter presents a very competent introduction to accounting in the United States. It analyzes the conceptual framework and the history of the profession and the development of accounting standards in the United States, with excellent references and comparisons to parallel developments in West Germany. Because of many unique features of US consolidation practices, a special chapter is devoted to consolidation practices in the United States.

The second chapter discusses public accounting and internal auditing. For US auditors this may be the most interesting chapter of the book. It starts with an article by Professor Havermann, one of West Germany's leading accounting practitioners and academicians. He presents an interesting West German perspective and evaluation of US auditing practices and their impact on auditing practices internationally. Havermann describes the important environmental differences that exist for auditing in the United States and elsewhere, particularly in West Germany. Probably the most important are the different legal environment and the different liability status of the auditor. The author makes interesting comparisons of the education of US and West German accountants. Although

initial admission requirements are much stricter in West Germany, the important goal of becoming a partner in a public accounting firm is usually achieved at about 33 years of age in both countries. There is a concise and accurate discussion of the US accounting profession's problems in recent years. Many of the differences between US and West German practices in the area of audit standards and quality control can be explained by the differences in the political, legal, and economic environments of the profession in the two countries. Nevertheless, there has been an increasing *rapprochement* in the auditing practices of both countries because of the increasing internationalization of the West German profession.

The third chapter deals with business law. It includes a very concise and competent description of US antitrust laws, company law, and product liability laws. In all cases, meaningful comparisons are made with the situation in Europe. The chapter begins with an excellent introduction to the legal system of the United States. Another paper is devoted to US company law and an excellent introduction to US antitrust laws. There are frequent references to the development and applications of similar laws in West Germany. An interesting note in the discussion of the US antitrust laws is their continued and significant influence on similar legislation in West Germany and the EEC. The US laws, which are the oldest if their kind, are presented as being exemplary. No country interested in developing or modifying its own laws should ignore the US experience in their development and enforcement. Equally rewarding is the discussion and comparison of US product liability laws through the eyes of one of the EEC's leading legal experts.

The fourth and final chapter deals with taxation. The chapter first introduces US tax policy, the US tax system, and the US – West German tax treaty. Special emphasis is given to the recent tax reform in the United States, which had an important influence on the tax laws of many European countries. A final section deals with tax aspects of West German investments in the United States through both acquisitions and the establishment of subsidiaries.

The US reader of this book cannot help being impressed by the attentive care with which West German authors have analyzed the status and evolution of US accounting and related fields. Regrettably, there are few comparable studies in the United States analyzing the accounting function in other industrialized countries.

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The New Environment in International Accounting: Issues and Practices *by Ahmed Belkaoui. Quorum Books, Greenwood Press, Westport, Ct, 1988, 220 pp. US$49.95.*

The author discusses seven areas in which there have been recent developments in international accounting: value-added reporting, employee reporting, value-added

taxation, comparative management and accounting research, segment reporting, cash flow accounting, and accounting for developing countries.

There are seven chapters in the book, one for each area. Each chapter is self-contained and does not cross-reference the others. The author's general strategy in writing a chapter seems to have been the following: begin by introducing some fundamentals, then summarize the relevant literature, and close with brief concluding remarks, citations, and a fairly extensive selected bibliography.

The first chapter, "Value-Added Reporting," concerns the issuance of a "value-added" statement to supplement the standard basic financial statements. The value-added statement begins with sales less the input costs of purchased materials and services. The resulting number is called value added, and is presented either gross or net of depreciation. The remainder of the statement reports how value added is allocated to employees in the form of wages and salaries, to providers of capital in the form of interest and dividends, to government in the form of taxes, and to retained earnings. (If the statement begins with gross value added, depreciation is also listed in the allocation section.)

Belkaoui briefly discusses the history of value-added statements and their popularity in the United Kingdom. He summarizes the literature on the rationale for value-added reporting and its advantages and disadvantages. He concludes by stating that value-added reporting reveals the social character of production by showing how value added is allocated among a team of cooperating members.

The second chapter, "Employee Reporting," discusses the issuance of special financial reports to employees and unions. Belkaoui reviews the literature on the factors influencing employee reporting, the information needs of employees and unions, the content of the special report, the role of the accountant in producing such a report, and also the role of the accountant in collective bargaining. I received no sense from the chapter of the actual extent in international practice of the issuance of special reports to employees and unions.

The third chapter is entitled "Value-Added Taxation." A value-added tax (VAT) is levied in many European countries. It is a consumption tax, but it differs from a retail sales tax in that it is levied at every stage of the business process, and not just at the point of final sale. A VAT is essentially a tax on the value-added number discussed in the first chapter; however, the third chapter does no cross-reference the first. A reason for this may be found in a brief remark of Belkaoui's in the first chapter (p. 8) that although the value-added statement and value-added taxation are based on the same concept, "they can and do exist separately."

Belkaoui discusses the fundamentals of VAT computation and collection, and then summarizes the literature on the advantages and disadvantages of a VAT. He departs slightly from the general strategy mentioned at the beginning of this review by including an impassioned plea that a VAT should be adopted in the United States to solve the debt and deficit problems.

The fourth chapter is entitled "Comparative Management and Accounting Research." Belkaoui begins by discussing the concept of a culture and anthropological research devoted to finding similarities and differences across cultures. He then reviews the academic literature in management and accounting dealing with cross-cultural studies. Much of the chapter consists of exhibits from the work

of others on the methodology of cross-cultural research. Belkaoui mentions his own work on the application of certain results in linguistics to cross-cultural research in accounting. A more descriptive title for this chapter might be "Cross Cultural Research in Management and Accounting."

Chapter 5, "Segmental Reporting," deals with the disclosure of information on the operations of domestic and foreign segments of multinational diversified companies. Much of the chapter concerns US standards for the disclosure of segmental information and other disaggregated information. Standards in other countries, especially the United Kingdom, are mentioned, but are not discussed with the same level of detail. Belkaoui also reviews the academic literature on the predictive ability and on the perceptions by users and markets of segmental information.

Chapter 6, "Cash Flow Accounting," discussed proposals by UK and US accounting researchers for greater disclosure and use of cash-based rather than accrual-based accounting information. Also, some empirical studies on the user reaction to and the predictive ability of cash flow information are discussed. Belkaoui also describes the situation with respect to cash flow accounting in the United States. He obviously wrote this chapter before the adoption of Statement of Financial Accounting Standards No. 95 by the FASB; nevertheless, he could have mentioned that most public US corporations were presenting their statements of changes in financial position on a cash basis before any action by the FASB. (This is shown by past editions of the AICPA's survey *Accounting Trends and Techniques.*) As this is a book on international accounting, I would have appreciated a mention of the problems involved in reporting the foreign currency cash flows of foreign subsidiaries in consolidated reports.

Chapter 7, "Accounting for the Developing Countries," is a collection of very brief discussions of a number of disparate topics, including the state of accounting practices in developing countries, the subject matter of international accounting in genera, strategies for setting accounting standards in developing countries, the efforts of various organizations to harmonize accounting standards worldwide, techniques of developmental planning, and the state of accounting education in the Third World.

This book may be useful to researchers, teachers, and other interested parties who are looking for a starting point to familiarize themselves with one of the seven areas indicated by the chapter titles. I would not prefer to use this book as a textbook because I find the discussions of the relevant literature to be too compressed.

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Staffing and the Smaller Firm *by M. J. Page, B. E. Elliott and N. S. Bristow*, *Research Board of the Institute of Chartered Accountants in England and Wales, London, 1989, 88pp, ISBN 085291 995 6.*

This booklet, published by the Research Board of the Institute of Chartered Accountants in England and Wales (the Institute) reports on two separate studies. Both studies concentrated on the existence, nature, and extent of difficulties experienced by chartered accountants in recruiting professional (and quasi-professional) staff to work with smaller firms. The matters discussed in the booklet could have implications for a nation's economy; small firms typically serve as key advisors to small enterprises on a variety of financial and business matters. Therefore, the potential contributions of smaller firms should not be constrained by inability to maintain necessary levels of staff.

The booklet presents in straightforward terms the views of small firm partners relative to perceived problems in recruiting in competition with the (then "Big Eight" firms. As larger firms could not effectively rebut the views of the small firm partners, the reviewer will endeavor to provide a measure of "balance" to the authors' work. For example, the booklet does not mention that larger firms may maintain "emerging" (a code word for "small") business practices, and the extent to which they are doing so. Services rendered by the emerging practice groups can include all business advisory, as well as most controllership functions, including systems, taxes, and internal auditing. Persons assigned to this specialty will have been recruited internally, on a basis of interest, inclination, and business ability.

One drawback must be mentioned, which affects both studies being reported. Research was completed in 1985! A four-year delay in publication appears significant given the enormous strides in office (and audit) automation which have been and are being made continuously by firms of all sizes. The studies represent: (1) a mail survey of a sample of chartered accountants in smaller practices, and (2) a series of structured interviews with practitioners located in particular geographic areas and identified as having recruitment problems. The survey will be commented on first.

The questionnaire was mailed to a representative sample selected from a complete list of practicing Institute members; offices with more than 20 partners were excluded. The sampling procedure was described as "broadly equivalent to a series of systematic samples." Respondents were asked to rate the importance of various problems as constraints on improvement in firm profitability and growth.

Cost of "qualified" accountants (i.e., of personnel with professional credentials) and cost of students were identified as the two most important limiting factors. Moreover, respondents compared the personal satisfactions of smaller practice work with that gained in larger firms. "Job satisfaction," "contact with clients," "breadth of experience" and "life style" were rated as better than in a big firm. Some of the respondents questioned whether large firm experience equipped employees to function successfully in a small firm practice, unless they were first retrained! In terms of the negative aspects of smaller firms, such factors as "post qualification training," "new developments and technology," "fringe benefits," "career flexibility" and "salary level" were considered "slightly worse" than in the

larger firms. The authors suggested the possibility that the advantages of working in a smaller practice might be unknown to sections of the population of accountants, and especially to students.

An important recommendation of the study involved organization of (student training) consortia and sharing of experiences with neighboring firms. An innovative suggestion to the Institute called for the creation of a computerized "bulletin board."

Firms were selected in very different fashion for the second study; the approach involved "structured interviews" at some 37 firms, chosen from a panel of 80; only firms experiencing recruiting problems were chosen. The reader is left to speculate whether or how firms without recruiting problems avoided or evaded such difficulties; if the knowledge had been gathered, readers might have gained insights into possible corrective actions.

General interest existed on the part of the smaller firms in computer applications for internal purposes and for rendering services to clients; but, of 93 computer applications, only one related to auditing. The authors did not explore the potential uses of computers to "automate" part of the audit, thereby realizing labor savings and mitigating the recruiting problems.

The participants perceived that there were two types of accountant: (1) the accountant from the very big firm who had "very specialized knowledge gained as a member of a mobile audit team;" and (2) the "other" accountant, who was seen as a person trained in a more direct relationship with the owners, partners or directors of smaller local businesses who rely on the local accountant for all financial advice.

There was some reluctance to hire accounting graduates. In general, nongraduates with specialized training were thought to have a more practical approach, suitable to the work of the smaller firms. Similarly, technicians were seen as an excellent alternative to students. (The discussion of recruitment of graduates/students/technicians is pertinent to practice in the United States, especially within those states which have a fifth-year education requirement for CPA candidates.)

Sixty percent of the respondents reported that potential employees may have been "put off" because they thought that small firm career opportunities were limited. Small firms were also said to be unable to afford the glossy brochures and recruitment expenditures of the larger firms. The interviewees registered concern that students had not been made sufficiently aware of the opportunities and advantages of working for a small firm; this was said to have been caused, at least in part, by their receipt of too much advice and information about the large firms from career advisers. This assertion could apply to *some* career advisers, but the reviewer believes that most of the blame can be charged to inadequate information: (1) some advisers may be unaware of the special interests, aptitudes, hopes and ambitions of their students; (2) they may not be alert to differences among firms, irrespective of size. Consequently, some advisers may not be equipped to guide their students to select the "best fit" firm.

There was also a degree of disenchantment with the Institute, which appeared to some to be dominated by the big firms; these persons characterized the Institute as failing to understand the problems of the smaller practice.

Although the executive summary stated that the survey questionnaire provides a general representative picture, whereas the interview survey provides qualitative information in greater detail, the combining of two studies with dissimilar questions and scoring systems is somewhat confusing. If the authors determined initially that two disparate study approaches were necessary "to give greater depth of understanding," better coordination should have been achieved.

Apparently, the questionnaires were completed primarily by small firm partners; presumably, the same holds true for the interviews. In these circumstances, one must assume that a relatively senior partner provided the answer. These parties essentially stood "in loco parentis" in verbalizing views attributed to their (potential) employees; the situation provides little assurance that the views of a (mostly young) job-seeker were correctly expressed by a (mostly middle-aged or old) respondent. It is also apparent that the attitudes, and reasons for job decisions of three types of job-seekers – graduates, students, and technicians – differ in important respects. Some vetting of the views attributed to job-seekers by respondents may be appropriate. Also, scant information was given on the manner in which the structured interviews were administered. It appears that the approach may not encourage interviewees to unburden themselves by "opening up" to the interviewer.

The reviewer believes that the reasons for the students' reported pervasive preference for bigger firms require study. The big firms cannot be viewed as being undifferentiated. Substantial differences exist from firm to firm with respect to audit approach, training, research, degree of entrepreneurial orientation, industry specialization, and personnel management. And, as noted, in the United States the large firms maintain highly successful emerging business practices, which offer atmosphere, training, and service opportunities similar to those obtaining in small firms.

What I liked of this book was its focus on a very real problem; the difficulties in England and Wales are replicated in the United States. Also, findings and recommendations are stated clearly and are classified, for ease of reference, by the constituencies which might be involved in corrective action. The booklet is of interest to teachers, career counselors, placement directors, college recruiters, and personnel partners in public accounting firms.

Felix Pomeranz
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AIMS and SCOPE The Aims of *The International Journal of Accounting* are to advance the academic and professional understanding of accounting theory and practice from an international perspective and viewpoint. The *Journal* recognises that international accounting is influenced by a variety of forces, e.g. governmental, political and economic.
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Competition, Independence and Audit Quality: The Korean Experience

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Key words: Audit competition; Management influence on audit opinions; National versus international firm competition; Statutory audit legislation

Abstract: *This paper examines the effect of competition on Korean management's ability to influence auditors with their newly acquired power to retain or change auditors. The study found that managements which received qualified opinions tend to change auditors more frequently than those which received clean opinions. Further, given qualified opinions, the managements which changed auditors had a greater probability of receiving clean opinions in the subsequent audits. The study did not find any evidence that Korean offices of Big Eight firms are more resistant to management pressures than are local auditing firms. User perceptions and institutional issues that may help explain the findings are discussed, based on extant literature.*

The recent experiences of international equity markets during October 1987 and October 1989 indicated that the economic world is becoming interrelated.[1] With more financial markets open to foreign investors, consumers of accounting information are no longer a well-defined homogeneous group. The economic environments in which companies operate and the economic events that accountants attempt to report, are increasingly diverse and complex. A company may have investors from several countries and each investor may need to interpret reports of economic activities of the company conducted in several countries. International accounting and auditing standards thus may be useful as a means (1) to enhance the measurement and disclosure qualities of accounting information, and (2) to reduce production, dissemination and analysis costs of accounting information.

The world-wide service and quality standard have often been used as a marketing point for international accounting firms.[2] The purpose of this paper is to examine the impact of different environments on audit quality. This paper attempts to examine this issue through a study of the experiences in one country, Korea. This study demonstrates that the relationship among interested parties in other economic, legal

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and cultural systems is quite different from that of the United States and that the role(s) to be played by independent auditors may therefore differ from that of the US profession.[3] This paper concentrates of three aspects of the topic: (1) the audit environments, (2) audit standards, and (3) audit quality.

The authoritative power of accounting standards varies in different legal and commercial systems. In some countries accounting standards are prescribed by the law of the land and accountants have no choice but to follow the rules of the country, whether or not these are consistent with the opinions of the international accounting community.[4] The reliability of the accounting data prepared under different national measurement rules, however, can be maintained across national borders. The issue of audit quality is addressed by this study through the examination of the accounting and auditing practices in Korea.

The Study

This study examines the effect of competition on audit practices in Korea. Much has been noted of the effect of competition on audit opinion, and thus on auditor independence and auditor change, since true competition for audit clients in the United States started approximately a decade ago (Chow and Rice, 1982; Shockley, 1981). By contrasting these experiences in the United States with those in Korea, we may gain an insight into the similarities and differences of the audit environments in the two countries. Specifically, this study examines the power of market forces, legal liability, and reputation in mitigating the influences of clients strengthened by the introduction of competition for audit services.

The pertinent parties in accounting and auditing are

(1) management, which is responsible for preparation of the statements,
(2) auditors who attest to the reliability of the statements,
(3) users of the statements, and
(4) the institutions which establish accounting and auditing standards and monitor the adherence to them.[5]

The experience of the Korean auditing profession is examined first; those firms with close ties to large international accounting firms are then examined.[6] Finally, the system-wide effort to improve the quality of audits in Korea is examined. A brief chronology of the development of the Korean auditing profession to the period of this study is presented, followed by an analysis of the auditors' opinions under conditions of competition.

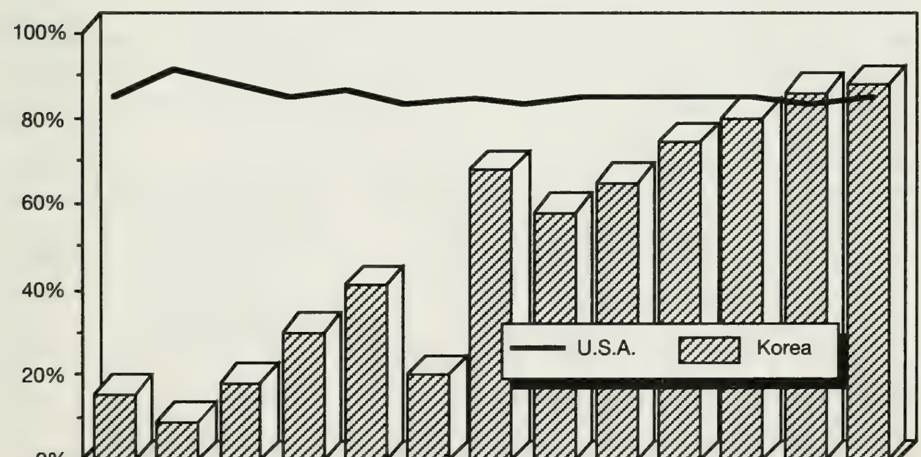
Competition and Audit Quality in Korea: A Background

Unlike in the United States, where the demand for audit services and the growth of the profession were largely market based, the auditing profession in Korea was mostly generated by government planners as a part of national economic development

programs.[7] The public offering of equity securities and the independent audit of financial statements were mandated by law in return for favorable treatment by the government, which had complete control over business licenses and financial resources. The majority owners of corporations considered audit fees and dealings with the Securities Supervisory Boards as pseudo taxes, necessary costs of doing business.

In December 1980, the Korean government consolidated in a single omnibus law all public laws pertaining to mandatory audits, effectively reshaping accounting and auditing standards as well as the Commercial Code. This law greatly expanded the number of companies subject to independent audits (demand), and abolished the previous extremely restrictive licensing procedures for independent auditors thereby opening opportunities for entry into the auditing profession (supply).[8] In the minds of the government officials, the major purpose of competition was to provide a vehicle to improve the competence and services of the auditors and to lay the foundation for a mature auditing profession. The internal organizational structure of the audit firms was also prescribed by the government.

This change was a very controversial one. Until this time, audit clients were assigned to auditors in a general ratio to firm size. This gave a degree of protection to audit firms. The opponents argued that the market-based selection of auditors would lead to wide-spread opinion shopping and that incompetent auditors would crowd out competent auditors (Simunic, 1980; Dykes and Hermanson, 1985). However, the government officials' desire to foster the growth and maturation of the auditing profession, and their confidence in their monitoring system (or supervisory ability), won over the concern for potential negative consequences. This plan was also compatible with the overall thrust of the market-based economy advocated by powerful technocrats.



	73	74	75	76	77	78	79	80	81	82	83	84	85
U.S.A.	86%	90%	88%	86%	87%	85%	86%	85%	86%	86%	86%	85%	86%
Korea	15%	9%	18%	30%	41%	20%	68%	58%	65%	74%	80%	86%	88%

Fig. 1. Percentage of clean opinions; USA versus Korea

Now that the system has been in place for several years, although with some minor adjustments, it is appropriate to evaluate the available experience. This paper concentrates on the assertion that competition will weaken the ability of auditors to withstand pressure from management to issue opinions different from those of the auditor's best judgments (auditor independence) and that the market factors, such as legal liability for malpractice and the protection of firm reputations, would not be sufficient to counter management pressure stemming from the competition. A set of data is presented that causes us to suspect that some outside influence may be affecting auditors' judgments and/or expressed opinions. As shown in Fig. 1, the proportion of unqualified opinions among large companies in the United States has remained at approximately 85 percent throughout the period of examination. In Korea, however, the proportion started at a mere 20 percent in 1973 before it rapidly increased to surpass the US level in 1984. If the change was the result of improved financial reporting in Korea, we have no cause for concern. However, if the changes were attributable to the auditees' desire to receive unqualified opinions, and the new power structure, because of competition, led to auditors issuing more unqualified opinions than were warranted, then we have a problem. Unfortunately, neither of the plausible factors, improved reporting and opinion shopping, is directly observable. We can only interpret observable behavior.

Competition and Management's New Power over Auditors

An independent auditor's examination of financial statements prepared by management reflects his/her accountability to the relevant parties, such as shareholders, creditors, and government. An independent auditor's examination of such financial statements serves to improve the credibility of the information contained in them. The environmental settings in which a demand exists for an independent audit also require that the auditor possesses certain characteristics and that the conduct of the audit satisfies certain standards. The standards are maintained by imposing institutional sanctions when an auditor fails to meet the standards, but also by market factors that

Table 1. Audit Environment and Control Mechanisms

Environment	Audit/auditor characteristics	Control mechanisms
Conflict of interest	Independence	Code of ethics
Owner/Manager	Judgment (in fact)	Practice standards
Creditor/debtor	Credibility (perception)	Legal libaility
Remoteness	Evidential matter	Fieldwork standards
Time	Competent	Quality control
Location	Sufficient	Peer Review
Complexity	Technical competence	Licensing and training
Business activity	Accounting	Continuing education
Information processing	Data processing	Sepcialist
		Computer systems
		Industry
Materiality	Effectiveness/efficiency	Market forces
Cost of audit	Audit techniques	Competition
Cost of audit failure	Audit risk	Legal libaility
		Institutional sanctions

make the auditor responsible for damages caused by his/her unprofessional conduct and a resultant loss of reputation and ultimately loss of income. Table 1 summarizes the environmental factors, audit standards, and the control mechanisms designed to uphold the standards. In this paper we are primarily concerned with the imbalance in the effectiveness of various factors in a competitive system in Korea, i.e., managements' ability to influence the independence of auditors, through auditor changes, compared with the counterbalancing forces of legal liability and firm reputation. Whereas changes of auditors are observable events, the impact of legal liability and firm reputation can only be inferred from other factors. Nevertheless, these two factors are of interest as they are likely to be dependent on environment settings.[9]

A change in auditors can be initiated either by the management or by the auditor. However, when concerns are expressed about auditor change because of the competitive nature of obtaining audit engagements, most attention is directed to client-initiated changes. As the Korean data do not reveal the party who initiated the change, we limit our analysis to year-to-year changes. Each year, before May, the various boards of directors must select the auditor to audit the financial statement for the fiscal year ending December of the current year. Thus any change in the auditor selected can be assumed to be based on the performances of the past year(s). The management's selection of auditors can be broadly classified as "honorable" or "less than honorable."

Honorable management would want auditors to be competent, probing, and objective. If management wishes to be forthright and to convey all reliable and relevant information, a competent and diligent auditor will be hired. If management perceives the quality of the audit to be substandard, or if the same quality audit can be obtained from another auditor at a lower cost, management has the responsibility either to engage another auditor or to try to negotiate a lower audit fee. A lightly expanded consideration of cost leads to the bundle purchase of service concept. We assume that the current auditor performed the audit function satisfactorily and economically, but that management also needs services for taxes and other areas. The current auditor may not be able to provided those non-audit services as well as some other firms. The management may then decide to choose another audit firm for other services and consider the audit as a bundled purchase. Such changes, though compatible with the spirit of competition, are not the concern of this paper.[10] If, however, management has a desire to present the results of operations in a manner not in accordance with Generally Accepted Accounting Principles (GAAP) and to conceal this fact from the public, there is a potential for conflict between management and the auditor. Should such a conflict arise, management would not be co-operative with their auditors. They may put undue pressure on the auditor to agree with their point of view. They may do this by threatening to remove the auditor from the current or future engagements.[11] In such circumstances, the auditor must choose between improperly accommodating management's wishes or maintaining an independent judgment. If the auditor persists, management may either carry out the threat to change auditors or yield. Management will accept the auditor change if and only if it believes it can find an auditor who will see things its way. If management succeeds in this change, the likelihood of audit failure increases and the quality of the audit suffers. The auditor must compare the costs of keeping independence (the possibility of losing a client)

against the costs of submitting to management's improper wishes (possible sanctions, legal liability, and loss of reputation).

The situation in Korea offers an opportunity to study the impact of competition in the market for audit services. In the United States, although the competition was controlled by the code of ethics, the spirit of competition was nevertheless present. In Korea before 1981, however, audit engagements were essentially a result of allocation.[12] Having a satisfied client did not mean that the auditor would have a long-term client, and the loss of a client merely meant a different client next time. There was very little incentive to compromise one's professional standards and judgements.[13] In 1981 the rules changed suddenly. The barrier to enter the profession was lowered; auditors were allowed to accept more engagements than their "fair share". As a result, a real risk of failing to obtain audit engagements was introduced. Another factor adding to the pressure on the auditors was that, for most clients, the value of an audit opinion was primarily to satisfy a government requirement. As this requirement could be satisfied by any auditor, it reduced the effectiveness of product differentiation gained by a positive professional reputation. Many supported the old system, arguing that the Korean public accounting profession was still in its infancy and would not be able to withstand the anticipated pressure from management. The next section analyzes the effect of competition on the quality of audit as evidenced in audit opinions and auditor changes.

Sample and Date

This paper analyzes audit opinions issued on financial statements of listed companies[14] over a 6-year period: 1978–1980 (before competition was a factor) and 1982–1984 (after competition became a factor).[15] The study attempts to identify changes in the distribution in types of audit opinions and to explore the potential impact competition might have had on the changes in opinions and auditor independence. The sample consists of all companies whose equity securities were traded continuously during the period 1978–1984 on the Korea Stock Exchange.

The answer to the question can be provided by the auditors and management involved. However, the parties involved in improper activities are not likely to reveal those acts voluntarily, thus ruling out interviews or questionnaire surveys as useful methods to study this issue. The next best approach might be an examination of the related audit work papers and documents. Unfortunately, these are private data not available for examination. Thus an analysis of publicly available date was made. Obviously, if management were successful in coercing the auditor to issue an unqualified opinion contrary to the auditor's true opinion, no external evidence would be left by which we might distinguish between the valid and the tainted opinion. Thus, initially, we must assume that the initial audit opinions were truthful and then observe the subsequent developments. Data analysis comprised four stages:

(1) whether competition has had any impact on auditor change behavior at the macro level,
(2) the association between the audit opinion issued and auditor change in the subsequent audit,

(3) the impact of auditor changes on subsequent opinions, and
(4) the relationship between auditor changes and management and audit firm characteristics.

Competition and Auditor Changes

Table 2 presents the proportions of auditor changes before and after competition for audits. We see that auditor changes were significantly more prevalent before competition was permitted. This may seem contrary to initial expectations, but a more careful examination indicates that auditor changes in the competition era resulted from active management decisions whereas previous changes in the competition era resulted from active management decisions whereas previous changes were the results of inaction. Given that audit fees were fixed[16] and that the benefits of audit services could be obtained from any qualified (authorized) auditor, management had little incentive to retain the same auditor from year to year. As the total number of audit clients for a given year was practically fixed, the Korean auditor had little incentive to try to retain the same clients. Since competition was introduced, however, management selects auditors. If the services are not delivered, management can change or threaten to change the auditor the following year. Thus the impact of competition on auditor changes in Korea is significant.

Table 2. Changes in Auditors Before and After the Introduction of Competition

Auditor		Before 1979–80	After 1982–83	Total
Change	*n*	371	151	522
	Row%	71.07%	28.93%	
	Col%	57.97%	23.97%	41.10%
Retain	*n*	269	479	748
	Row%	35.96%	64.04%	
	Col%	42.03%	76.03%	58.90%
Total	*n*	640	630	1270
	Row%	50.39%	49.61%	

Table 3. Audit Opinions and the Subsequent Auditor Changes

Auditor		Before competition			After competition		
		Clean	Qualified	Total	Clean	Qualified	Total
Change	*n*	257	114	371	108	43	151
	Row%	69.27%	30.73%		71.52%	28.48%	
	Col%	57.49%	59.07%	57.97%	21.95%	31.16%	23.97%
Retain	*n*	190	79	269	384	95	479
	Row%	70.63%	29.37%		80.176%	19.83%	
	Col%	42.51%	40.93%	42.03%	78.05%	68.84%	76.03%
Total	*n*	447	193	640	492	138	630
	Row%	69.84%	30.16%		78.10%	21.90%	
		$\chi^2 = 0.14$			$\chi^2 = 5.01$		

χ^2 (d.f. = 1, α^2 = 0.05) = 3.84.

Types of Opinion and the Subsequent Changes of Auditors

Table 3 present the pre- and post-competition era experience between the type of opinions issued and auditor changes. Before competition, the type of opinion issued had no direct effect on the change of auditors in the following period, consistent with the allocation system that existed during that period ($\chi^2 = 0.14$). After introduction of competition, however, when management had the power to choose auditors, there was a significant correlation between the type of opinion and the change ($\chi^2 = 5.01$).[17] There is little doubt that those managements which received qualified opinions are more likely to change auditors than those which received clean opinions. The next question is whether managements which change auditors have a good chance to find auditors who will issue clean opinions. Even if management appoints a new auditor, if the new auditor also maintains independence, no harm is done.

Change of Auditors and Subsequent Opinions

Considering the firms which received a qualified opinion in one year, Table 4 shows the opinions received in the following year grouped by auditor changes and periods. Again, we find the distribution of second-year opinions was unaffected before competition ($\chi^2 = 0.01$), but the correlation is significant after the introduction of competition ($\chi^2 = 4.8$).[18] Companies which changed auditors, after receiving qualified opinions, had a much better chance to receive clean opinions than companies which retained the same auditors (62 percent versus 41 percent). The data are consistent with the contentions that competition gave management the power to influence auditors, and that they are effectively using this power to improve the likelihood of receiving clean opinions. However, the correlation alone does not seem sufficient to conclude that a substantial compromise of auditing standards or audit quality has been made. The correlation between auditor changes and subsequent opinions might have been caused by other factors.

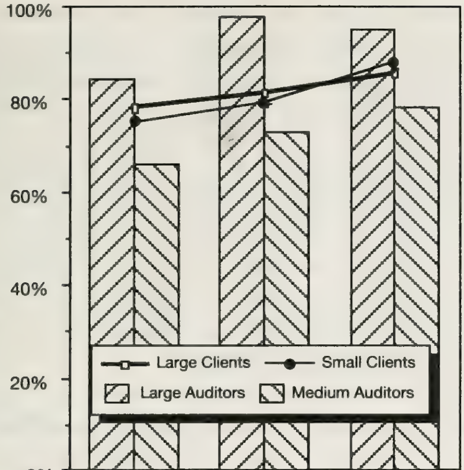
Audit Firm Size and Other Factors Affecting Audit Quality

The size of client companies and audit firms was examined. The larger companies, with larger audit fees, presumably could exert greater pressure on the auditors to "see

Table 4. Audit Opinions for the Year Following the Issuance of Qualified Opinions by Period and Auditor Change

Auditor		Before competition			After competition		
		Clean	Qualified	Total	Clean	Qualified	Total
	n	34	80	114	26	16	42
Change	Row%	29.82%	70.18%		61.90%	38.10%	
	Col%	58.62%	59.26%	59.07%	39.39%	22.22%	30.43%
	n	24	55	79	40	56	96
Retain	Row%	30.38%	69.62%		41.67%	58.33%	
	Col%	41.38%	40.74%	40.93%	60.61%	77.78%	69.57%
Total	*n*	58	135	193	66	72	138
	Row%	30.05%	69.95%		47.83%	52.17%	
		$\chi^2 = 0.01$			$\chi^2 = 4.8$		

χ^2 (d.f. = 1, $\alpha^2 = 0.05$) = 3.84.



	1982	1983	1984
Large Clients	78%	81.4%	85.4%
Small Clients	75.4%	79.3%	86.6%
Large Auditors	84.4%	97.8%	95.1%
Medium Auditors	66.1%	72.7%	78.3%

Fig. 2. Proportion of clean opinion by size of auditors and clients

things their way." Likewise, a larger audit firm with a large client base should be able to withstand pressure better, either because the impact of any one client is not likely to be major and/or the firm has a reputation to protect. Figure 2 shows the distribution of opinions issued by medium and large firms[19] grouped by the size of the client companies. Whereas the size of the client companies had no significance, the size of the audit firm did. The three largest firms, with Big Eight affiliations, issued a significantly greater proportion of clean opinions than did the medium-sized firms. This result is contrary to the belief, held by governmental planners that the development of large audit firms with international affiliations is an effective way to maintain audit quality in the face of competition. This is not to say that the larger firms had poorer quality control. Based on the issuance of qualified opinions alone, the study found no evidence of greater independence than that of the local firms. It could be argued that the larger firms had larger clients who are more likely to have better accounting internal control and systems that warrant a greater portion of clean opinions. However, according to the same data, the larger companies overall did not receive a greater proportion of clean opinions.

Several possible explanations, not examined in this study, are possible. Perhaps the clients of Big Eight firms have gone through a type of screening before the actual audit engagement thus ensuring management quality and integrity. Alternatively, the reputation and influence of the Big Eight firms may have been sufficient to cause management to accept the auditor's recommended adjustments and statements. These factors could have resulted in clean opinions. Yet another reason might be that the benefits of economy of scale and scope of Big Eight firms do not filter down completely to their smaller offices in Korea. That is, the Korean affiliates of Big Eight firms face

local competition which does not have to bear the overhead costs of international firms for training and other facilities without receiving the full benefits of being a member firm. This would be especially true in audits of clients with limited overseas investments who would have little use for a world-wide presence by the auditor. Because of high overhead costs, the Big Eight firms face greater pressure to obtain and maintain audit clients than do their local competition. Related to this phenomenon is the recent interest in merging among Big Eight firms. It is difficult to imagine increased economies of scale and scope at the firm level, but at the office level, especially for smaller offices, the benefits of scale and scope become apparent. There may be other more plausible explanations, especially firm-specific factors, but none is supported by the data. The author is not aware of other studies that have examined this issue. This remains, however, a limitation of this study.

Potential Reasons for Disagreements between Managements and their Auditors

To determine why managements may wish to influence improperly auditors, the author examined the correlation between income reported and the related audit opinions. Assuming that a management wishes to report high earnings (good news), management might be tempted to use accounting methods which are not generally accepted, if income falls from the expected level. Table 5 presents data consistent with this view.[20] In general, management will "pay the price" of a qualified opinion to present a healthy picture of the company.

Returning to the set of questions asked earlier in this paper, we can conclude the following:

(1) When management was given freedom to choose its own auditor, the rate of repeat engagements increased substantially (Table 2).
(2) The issuance of qualified opinions and the subsequent change in auditor are strongly related (Table 3).
(3) Having received a qualified opinion, companies which engage a different auditor have a greater probability of receiving a clean opinion in the following year (Table 4).

Table 5. Income (Relative and Absolute) Levels and Audit Opinions, for 1982–1984

Opinion		Relative net income			Absolute income		
		Increase	Decrease	Total	Profit	Loss	Total
Clean	*n*	470	294	764	692	72	764
	Row%	61.52%	38.48%		90.58%	9.42%	
	Col%	85.77%	74.06%	80.85%	83.57%	61.54%	80.85%
Qualified	*n*	78	103	181	136	45	181
	Row%	43.09%	56.91%		75.146%	24.86%	
	Col%	14.23%	25.95%	19.15%	16.43%	38.46%	19.15%
Total	*n*	548	397	945	828	117	945
	Row%	57.99%	42.01%		87.62%	12.38%	
		$\chi^2 = 20.39$			$\chi^2 = 32.15$		

χ^2 (d.f. = 1, $\alpha^2 = 0.05$) = 3.84.

(4) The last two relationships above did not exist before the introduction of auditor competition (Tables 3 and 4).
(5) Large international firms tended to issue a greater proportion of clean opinions, whereas the size of the client companies had no impact on the opinion issued (Fig. 2).
(6) Data are consistent with the assertion that competition introduced a new opportunity for management to select an auditor satisfying its needs, and it might be abusing the opportunity.

Once it's established that the market for audit services, before and after the introduction of competition, are different and that the quality of audit judgments may have been tainted because of lack of independence, several related issues require examination. The issues explored in this paper are (1) user reactions to auditor–client relationships that may affect audit quality, and (2) institutional efforts to counter management pressures on their auditors.

Perception of the Users

An important question is "How do users of financial statements perceive these developments in the Korean audit profession?" Direct observations of user reactions were not made. Instead we examined other studies relevant to the issues under examination in this study: (1) How do users in Korea react to a potential impairment of the auditor's independence? (2) Do users of different national backgrounds react differently to the factors studied? Knapp (1985) surveyed bank loan officers (users) in the United States and discusses several factors that may affect the relative powers of management and auditors:

(1) the subjectivity of the accounting and auditing standards involved (conflict issue),
(2) the financial health of the company (financial condition),
(3) the amount of non-audit services supplied by the audit firm, and
(4) the competitiveness of the market for audit services.

Ha (1986) conducted a survey study in Korea, retesting the hypotheses of Knapp, of loan officers from Korean banks as well as from Korean branches of US, European,

Table 6. Perceptions of Loan Officers on Impact of Factors on relative Bargaining Powers of Management and Auditors

Factor	Knapp	Ha			
	USA	USA	Korea	Europe	Japan
Conflict issue	11.58	NS	NS	NS	NS
Financial conditon	15.82	5.01	NS	NS	NS
Management services	1.58	8.08	5.91	13.46	NS
Competition	1.42	NS	3.6	7.9	NS
Sample size	43	40	63	55	7

NS — Not significant at 5% level.
Numbers represent the percentage of variations explained.

and Japanese banks. As shown in Table 6, the results differ greatly from those of Knapp. The nature of a disagreement or the financial condition of the client companies is not considered to be a significant factor in determining the relative bargaining positions of the management and the auditor. As noted earlier, in Korea, disagreement on the proper accounting method is not an issue that must be resolved before the filing of financial statements. The non-significant impact of financial condition seems contrary to the result shown in Table 6; the companies with reduced income or a net loss have a greater probability of receiving qualified opinions. However, if one considers the greater freedom given to Korean management, the users might believe that management will accept a qualified opinion rather than confront the auditors. Another plausible explanation is that very few general credit loans are made by banks in Korea and Japan; most loans are either secured or guaranteed. Because Korean bankers do not view auditors as a potential avenue of recovery in case of default they minimize the risk of compromising behavior as discussed by Knapp (1985, p. 208). Quite different from the situation that Knapp described, loan officers in Korea considered the effect on non-audit services and the competitive market for audit services as having a significant influence on the balance of power between the parties. An exception to the overall results are the opinions of loan officers in US banks. In the cases of financial condition and competition, US bankers in Korea revealed opinions consistent with those of their counterparts in the United States, indicating that the perceptions formed in one environment (the United States) are carried over into another environment (Korea).

The results of Ha's study are significant as to the setting of world-wide audit quality standards. Ha found that users from different backgrounds reacted differently to the potential impairment of auditor independence. As some financial statements are used in several distinct economic systems, the reliance on audit reports is an international concern. Joint ventures and overseas subsidiaries whose statements are consolidated with those of the parent firm are examples of the situation. How should one set audit standards in this situation? That is, which audit environment (client, auditor, user, and regulatory bodies) should be considered when deciding on acceptable audit and business risk levels (Brumfield et al., 1983)? Is this primarily a concern of international audit firms only, or one that faces all users of accounting information? What do the auditor's reports mean when they refer to consolidated statements of multinational companies? Does it mean that all segments of the company were audited based on the accounting and audit standards of the reporting country or the standards of each respective country. If one is to assert that the statements were audited based on one uniform standard, then we must assume that the Korean offices of Big Eight firms apply one standard on audit for domestic use and another for international use. This is possible, but not explicitly stated by the firms.

Institutional Efforts to Counter Managements' Power

The governmental institution to protect the interest of the financial statement user in Korea is the Securities Supervisory Board (SSB). The Review Committee of that Board is responsible for all matters relating to the quality of accounting and audits and also for the examination and licensing of Certified Public Accountants. As indicated

in the analysis of the related data, the competitive environment for audit services caused increased "opinion shopping" by managements. Unlike in the United States, legal liability and firm reputation does not seem to be an effective incentive in Korea for auditors to maintain their independence. The Korean governmental institution has an additional responsibility to provide the incentive to auditors to maintain their independence, thus providing the real value of the audit. Potential types of incentives are to strengthen the bargaining power of the auditors, such as sanctions imposed on management for pressuring auditors to issue improper opinions, and/or sanctions imposed on auditors for sub-quality audit work, thus increasing the expected costs of "going along with management."

The SSB of Korea decided to take the latter approach. Since 1983, the committee has reviewed the work papers of selected audits.[21] Each year several different areas of accounting were selected for concentrated scrutiny, distributed across different audit firms. The firms which received adverse opinions or disclaimers were generally excluded, indicating that the Committee was primarily concerned with the quality of audit in the sense of issuing unwarranted clean opinions. Companies where audit opinions were changed to a clean from a qualified opinion, and those reporting increased net income through changes in accounting policies were especially selected for a more detailed general review. In addition, new public offerings of securities and companies with financial difficulties were also reviewed (a special review). The Committee also tried to prevent audit failure by publishing the selection criteria for the detailed reviews in advance. The Committee sought to improve accounting practices by informing managements that it is aware of certain practices.[22] The Committee has been vigorously increasing the number of detailed reviews. In 1987 it reviewed work papers of 665 audits; 166 audits contained 250 cases of major and minor deficiencies. Seventy-two cases related to the auditors' failure to note non-conformity with accounting standards. The remainder were violations of field standards and reporting standards. In six of these cases, the Committee recommended that the Ministry of Finance should impose formal sanctions against the auditors involved.[23] Sanctions by the government are the major, if not the only deterrent against auditors' willingness to accommodate unlawful wishes of managements. Korea has not had a civil suit against an auditor for damages due to an audit failure although criminal sanctions have been levied against several auditors. Market differences exist among different economic systems and the institutions' roles in each market are also different. The differences in user perceptions and institutional setting present difficult challenges to audit firms that operate in the international market.

Summary Discussion

This paper proposed to show that world-wide audit standards might not be feasible or even desirable. Accounting and audit environments, managements, auditors, users, and the institutional settings differ among economic systems. The relationship between management and auditors in Korea is different from that in the United States, as seen by the effect of market competition for Korean audit services. Korean audit firms with strong ties with Big Eight firms are not immune to societal differences; their

reactions to the competitive market are not significantly different from those of other firms in Korea. Although international accounting firms develop a world-wide approach to auditing and try to assure clients and users that all the offices in the firm operate under the same quality standards, the actual practice might fall short of their claims. The internal efforts of all offices might be the same, but different external environments might influence the effectiveness of the quality control programs.

Differing user perception of the factors that affect auditor independence have a real impact on the effectiveness of audits. As a major component of the value of an audit is in the perceived increase in the reliability of financial statements from the independent auditor's examinations, the perceived independence of the auditor is as important as independence in fact. The ability of the auditing profession as a whole to withstand the pressures of management, together with the sanctions imposed by society for audit failures, help determine the economic sacrifices one might be willing to make to maintain independence or to insist on a quality audit. Furthermore, the auditor of a company must meet not only the challenges of the society to which the client belongs, but also the requirements of another economy in which the financial statements may be consolidated and used by a different set of users.

Even if one could establish a set of international audit standards, its effectiveness in improving the quality of accounting and auditing depends on environmental factors. It is also not certain that a uniform technical standard, whether within a firm or profession-wide, will help reduce the related costs of audit, including training. Much of the difference is not within the narrow boundaries of accounting and auditing, but in the economic and financial markets as well as legal systems, which have a direct and significant impact on an auditor's behavior. Perhaps a more fruitful area of research could be the identification of the fundamental differences that do exist in the accounting and audit environments in different parts of the world and how those differences influence the auditor's examination and reporting behavior. International accounting firms should examine organizational structures and firm-level quality control standards to ensure that acceptable audit quality is maintained throughout their audits.

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1. Even casual observations reveal markedly increased overseas investments, in both directions. See the publication by Peat Marwick Foundation (1988), for a good description of the current interest in this area.
2. For example, see Deloitte Haskins & Sells International, "DH & SI Audit Plus: The Deloitte Haskins & Sells International Audit Approach" (February 1987).
3. In Korea, the very existence of the auditing profession is based on the economic development plan of the government, Economic Planning Board. Day-to-day management of the profession is delegated to the Securities Supervisory Board, Korea's SEC, which takes an active role.
4. This is not an unusual phenomenon. In the United States, some regulated companies will provide accounts according to the rules and regulations of the overseeing body rather than those of GAAP.
5. The author's view of audit standards is slightly broader than that implied by the Peat Marwick Foundation (1988) which stated that "Practising auditors are the only parties who apply auditing standards." Although the auditor is the party actively applying the standards, the cost/benefit aspects of the standards are largely determined by other factors, and thus the audit environment is an integral part of the effectiveness of audit standards.
6. The experiences of firms with Big Eight ties are of special interest as they are supposedly operating under the world-wide audit programs and quality standards of those firms.

7. "Market based" means that the benefits of audit services were internalized by the purchaser and the relative cost/benefit considerations determined the volume of services demanded.
8. Before this change, the number of people passing the CPA examinations was between 20 and 30 per year. After 1982, the number increased greatly to hundreds per year.
9. Auditors' legal liability under the tort law is almost impossible to measure in Korea, as no case has been tried in the courts of law. In the absence of bad publicity based on court decision, the motivation for auditors to protect their reputation is also elusive. This paper looks to the Big Eight firms as firms which already have reputations to protect.
10. As discussed later in the paper, in the minds of a class of users in Korea, the rendering of other services by the auditor is a cause for concern with respect to the auditor's ability to maintain proper independence (Ha, 1986). A detailed study of this area is beyond the scope of this paper.
11. It is possible that some managements may look for incompetent auditors initially. The research design of this study does not allow us to identify these cases.
12. Extremely strong barriers to new entries into the progression and the government-induced demand for audit services put the CPAs in Korea in an enviable position.
13. This assurance of independence was the main justification for the allocation system. Government planners believed that the profession in its infancy needed this protection.
14. As of 1986, more than 3500 Korean firms were subject to mandatory audit for various reasons. This study concentrates on the publicly held firms whose stock are traded on the Korea Stock Exchange. These are the firms that dominate the national economic activities.
15. 1981 was omitted because it was a transition year. In 1985 the Ministry of Finance restricted the audits of large companies to large audit firms, causing numerous mergers of audit firms. It therefore became almost impossible to trace auditor changes in subsequent years.
16. Before the change, the audit fee schedule was set by the Ministry of Finance, based on the asset size of the firms.
17. All statistics used in this paper are based on analysis of variance. x^2 statistics are provided in the tables. When the paper refers to significant correlations, statistically significance at the 5 percent level is indicated.
18. Although we are not able to provide objective evidence, it is plausible to assume that some unqualified opinions might have resulted from management's threat to remove the auditor in the following year or a promise of retention. If we consider the hidden effect, the impact of competition on the effectiveness of opinion shopping is greater than indicated by the data.
19. Small firms are not allowed to audit listed companies.
20. Under Korean law, management can present financial statements not prepared in accordance with GAAP and be issued a qualified or adverse opinion. In fact over 90 percent of the qualified opinions are because of non-conformity with GAAP, rather than uncertainty or inconsistency. An inventive for the wilful deviation from GAAP is provided in the Commercial Code, which requires a positive net income in the period of dividend distribution, but allows for non-GAAP accounting methods. This is a case of the legal requirement for cashflow outweighing the desire for a clean opinion.
21. Most of the reviews were conducted after the period covered in this study. Thus an analysis of the effectiveness of the review on audit quality was not feasible.
22. As the Korean accounting standards provide less freedom than the US standards, the accounting practices in selected areas may be monitored.
23. Four of these sanctions recommended were against international firms; the minor sanctions were spread across all firms, large and small.

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The Local Value Added Statement: A Reporting Requirement for Multinationals in Developing Host Countries

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Key words: Developing host countries; Local value added statement; Multinational corporations; Transfer prices

Abstract: *To the citizens of a nation, the goal of national economic growth seems desirable and relatively uncontroversial. The impact of a multinational's operations on the creation of national wealth is reflected in its local value added. To encourage local production and to increase the value added in the host country, governments and various other political participants of the host countries, and developing host countries in particular, often make public-policy decisions concerning the operations of multinational enterprises. This paper suggests that the inclusion of a local value added statement in the host-country annual reports of multinationals would provide useful information for decision-making by the dominant stakeholders of these enterprises in developing host countries.*

Whereas multinational enterprises are interested in maximizing their overall benefits from total global operations, the priority interest of their host countries is to maximize national economic benefits. A potential conflict of interest exists between the multinational enterprise and the countries in which it operates.[1] Although it is difficult to predict that this conflict would ever be totally resolved, the relationship between the two parties would seem to be improved if attempts were made to bridge the information gap between the multinationals and their constituencies in the countries concerned.

This paper introduces the "local value added statement" as a reporting requirement for multinational enterprises in developing host countries. The author predicts that if the multinationals do not voluntarily attempt to bridge the information gap with their constituencies, sooner or later the developing host countries will impose reporting requirements, such as the one suggested in this paper. This prediction stems from the development in recent years by which most of the developing countries have gained more "bargaining power" in dealings with multinational enterprises.[2] If multinational enterprises disregard their social responsibility and do not respond to the information needs of their constituencies, then the host countries may impose higher costs on the

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multinationals in the form of increased controls, higher taxes, lower incentives, and in extreme cases expropriation or nationalization.

Stakeholders of Multinationals and their Information Needs

Corporations have long been considered to have obligations to stockholders and corporate financial reports are prepared with consideration of the information needs of this group. In recent years, the concept of corporate constituencies has been expanded to include, *inter alia*, investors and other finance providers, employees and trade unions, government agencies and public interest groups, and suppliers and customers. These constituencies are termed "corporate stakeholders." Freeman and Reed (Ref.3, p. 91) noted that the stakeholders to whom a corporation is to be accountable denote any identifiable groups or individuals who can affect the achievement of the corporation's objectives or who are affected by such achievement.

The stakeholder concept has given rise to concepts of the "public accountability" of corporations. Especially in the case of multinational enterprises, world-wide pressures for more disclosure on their roles in the economies of the host and home countries has forced these business entities into a new context of social responsibility.[4] Whether or not multinationals will discharge this public accountability depends on the relative costs and benefits of doing so. If the perceived benefits outweigh the perceived costs of an action to discharge public accountability, a multinational may be expected to take such an action.

In developing countries, where securities markets are limited and where government policy-makers need to monitor and control the activities of business enterprises to devise and implement various public policies, constituencies other than investors seem to have a greater interest in the affairs of multinational enterprises. In particular, government, trade unions, and public interest groups appear to be the major stakeholders. The decisions and actions of these groups can have a significant effect in determining how multinational enterprises can conduct their business and, therefore, achieve their goals. The National Industrial Conference Board[5] reported that most obstacles to private foreign investment in host states, as perceived by a sample of international business executives, are thought to be a function of government policies, of government administration, and of a country's political, economic, or structural environment. Blake (Ref.6, pp. 64–70) showed how multinational enterprises, through communication with the political participants, attempt to influence the environment to achieve their desired objectives.

As mentioned above, an inherent conflict of interest exists between multinational enterprises and the host countries. Vernon (Ref.7, p. 165) highlighted the concern in the context of developing host countries:

"The interests of governments and those of foreign-owned enterprises in developing countries are usually compatible in some degree; both sides, at any rate, usually think they will gain by a continuation of the relationship. But elements of conflict are always present, in the sense that one or another would like to acquire more of the available pie."

Adam Smith, more than two centuries ago, contended that because of the existence of an "invisible hand," society can attain maximum possible benefits if individuals (and presumably business enterprises) are permitted to pursue their own goals. Perhaps, in the case of domestic business enterprises, the home nation may expect to capture somewhere within its geographic boundaries the total net contributions of the enterprise. However, in the case of multinational enterprises with world–wide connections and business operations, any individual nation may not be able to capture its legitimate share of the total global benefits generated by the multinationals. To attain maximum possible benefits for the national economy, the host country, and particularly the developing host country, needs to frame and implement public policies to insure that multinational enterprises are providing benefits appropriate to their local operations. The measurement of national benefits can differ sharply between nations, as a result of differences in national objectives. Generally speaking, the national objectives of developed and developing countries may be distinctly different.

The literature of development economics suggests that the primary objective of developing countries is to achieve economic development through the best possible use of available scarce resources and that foreign direct investments can contribute to the attainment of this objective if the social benefits of such investments exceed the social costs. This issue, explored in depth by Little and Mirrlees[8] in their research work on project appraisal sponsored by the OECD, emphasizes that the domestic prices which foreign investors encounter and sometimes influence, may not accurately reflect the social value of the resources used. This may arise either because of market distortions (tariffs, subsidies, inappropriate exchange rates) or because of implicit or explicit price control (e.g., in the labor market, where there is much unemployment, wage rates may exceed the opportunity cost of labor). To calculate properly the social costs and social benefits of foreign direct investments, shadow prices may need to be imputed to all inputs and outputs of the enterprise(s) concerned.

Shadow price, or opportunity cost, represents the real cost to society of using a factor — land, labor, capital, or foreign exchange — in one project instead of another.[9] Shadow pricing converts market prices of all costs and benefits into public costs and benefits and uses the nation's cost of capital (time preference for money) as the discount rate. This procedure is known as "cost–benefit analysis." Although this exercise may be useful for a specific evaluation, it does not provide any mechanism to disclose the costs and benefits of the operations of multinational enterprises within the framework of the usual financial accounting reports. Moreover, the computation of shadow prices of all inputs and outputs is based on judgements of various economic parameters. This does not seem to be an acceptable premise for financial reporting under current accounting conventions.

The Value Added Statement

Since the mid–1970s, a "new" form of accounting statement has appeared in the annual reports of larger British companies. This is known as the "value added statement." Financial reporting in Continental Europe indicated a preference for the value added statement for many years before the 1970s. The value added reflects the

production contribution made by the company, i.e., such as the increase in value which arises through the company's manufacturing, and handling. This may be considered the net wealth creation by an enterprise during a particular period. Rutherford[10] explained value added by advancing a definition drawn from Ruggles and Ruggles:[11]

"The value added by a firm: i.e. the value created by the activities of the firm and its employees, can be measured by the difference between the market value of the goods that have been turned out by the firm and the cost of those goods and materials purchased from other producers. This measure will exclude the contribution made by other producers to the total value of this firm's production, so that it is essentially equal to the market value created by this firm. The value added measure assesses the net contribution made by each firm to the total value of production; by adding up all these contributions, therefore it is possible to arrive at a total for the whole economy."

Value added appears in economics as just one of the many issues in national income accounting. In the accounting literature the value added statement is normally considered as a part of "social responsibility reporting." It is in this context that the Accounting Standards (Steering) Committee in the United Kingdom in its seminal publication, *The Corporate Report*,[12] proposed the inclusion of a value added statement in the annual reports of British companies. Gray and Maunders[13] provided an in-depth analysis of the relevance of the value added statement for certain users of financial statements. Burchell *et al.*[14] analyzed the forces that led to the rise of interest in the value added statement in the United Kingdom during the 1970s and provided the following summary of the empirical evidence on the rise and fall of value added reporting (p. 386):

"Fourteen companies (out of 300) in the Institute of Chartered Accountants in England and Wales' Survey of Published Accounts included value added statements in their annual reports for the year 1975–76 (ICAEW, 1978 [Ref.15]). This figure grew to 67 for 1977–78, 84 for 1978–79 and 90 for 1979–80 before declining to 88 in 1980–81, 77 for 1981–82 and 64 for 1982–83 (ICAEW, 1980 [Ref.16]); Skerrat & Tonkin, 1982 [Ref.17]; Tonkin & Skerrat, 1983 {Ref.18]). Other surveys indicate that more than one-fifth of the largest U.K. companies produced value added statements in the late 1970s (Gray & Maunders, 1980 [Ref.13])."

Table 1. The form of the value added statement

	Number of companies			
	North America 65	Europe 100	Rest of world 35	Total 200
	%	%	%	%
Both numerical statement and pictorial representation	8	8	6	8
Numerical statement only	9	6	3	6
Pictorial representation only	1	8	—	5
	18	22	9	19
No value added statement	82	78	91	81
	100	100	100	100

Rutherford,[19] Renshall *et al*,[20] Morley,[21] McLeay,[22] and others showed that different companies use different methods to calculate the value added amount. The calculative diversity in value added statements often confuses the readers of financial statements. The diversity is compounded by the fact that value added statements are presented in a number of different formats. Tonkin[23] in the *World Survey of Published Accounts* of 200 of the world's leading companies, presented the information shown in Table 1 on the extent of value added reporting and the diversity of presentation formats (p. 410).

In spite of the fact that the attention given to value added statement in the United Kingdom subsequently waned during the early 1980s, Meek and Gray[24] suggested that US companies consider including a value added statement in their annual reports. They argued that this would be in conformity with the requirements of US GAAP (e.g., SFAS No. 2 and SFAS No. 5). They further argued that the business conditions contributing to the "rise and fall" of the value added statement in the United Kingdom are not consistent with those in the United States, and that the value added statement deserves serious consideration in the United States. In discussing the merits of value added statements, Meek and Gray[24] stated (p. 81):

"However, it is a mistake to think of the VAS (value added statement) only in the context of reporting about social responsibility. The activities of a business affect more than the owners. Business creates wealth, employs people, rewards investors and creditors for risking their funds, and pays taxes. It is this view of business performance that the VAS portrays."

For a uni-national business enterprise, the value added created by its operations may be an appropriate measure of its contributions to the interests of the corporate stakeholders in an economy. For a multinational enterprise, however, which employs various resources transferred from related sources outside the host country, the value added may not reflect its true contribution to the economy, because the rewards of all the factors of production do not remain within the national economy of the host country. Officially or unofficially the multinational enterprise remits the rewards of various factors of production across the national boundaries. Vaitsos[25] demonstrated how multinational enterprises operating in developing countries maximize their "effective profitability" through such remittances.

The basic assumption in the preparation of a value added statement is that the revenues and expenses of an enterprise reflect "market prices." In the context of a multinational enterprise operating in a developing country, frequent use of administered pricing of internally transferred goods and services results in price distortions. Therefore, the value added created by a multinational enterprise may represent its "wealth creation" in the world economy and may not be an appropriate usable measure of the host country's economic benefits from the operations of the enterprise.

Local Value Added

To assess the economic impact of these enterprises, the dominant constituencies of multinational enterprises in developing countries need information on the consequences of their operations as they relate to the country's balance of payment position and

various other economic activities within the national economy. The use of this type of information may be viewed within the context of a macroeconomic (national economic) model. Bos *et al.*[26] developed such a macroeconomic model to evaluate the economic effects of multinational enterprises in developing countries.

Measuring the (gross) economic effects of multinationals in a national economy is essentially an exercise in estimating the "local value added" by these enterprises. Employment generation, capital intensity, transfer pricing, competitive structure, and the balance of payments effect of multinationals are the main factors affecting local value added.[27]

The local value added created by a multinational enterprise in a host economy can be computed by deducting from the monetary amount of the total output the costs of all materials and services which were brought in from outside the country. This will be equal to the amount of money spent by the multinational for the purchase of various factor inputs, including government services, in the host country.

The total impact of multinational business operations on a host country's balance of payments has long been a controversial issue. It is often alleged that multinational enterprises operating in developing countries take out more resources (in terms of foreign exchange) than they bring in. Lall and Streeten,[28] studying the balance of payments effect of 159 companies in six developing countries over a 5–7-year period in the late 1960s, concluded that the balance of payments impact of the multinational firms was negative for five countries. The net negative effect was derived mainly from the assumption that domestic investors would undertake the production in the absence of the foreign investors. Because of the variations in methodologies used to calculate the balance of payments effect of multinational business operations in developing countries, different studies have found different magnitudes of balance of payments effect (see Ref.26, pp. 30–35). However, the issue is very important for the process of economic development in developing countries. As all the expenses involving foreign exchange are deducted from the gross output of a multinational enterprise, the local value added reflects the balance of payments effect of the enterprise. An explanation of this point follows.

It is assumed that the local production and sales of the enterprise result in an import substitution and thereby save foreign exchange outflow of the local economy. The gross output of a multinational (local sales plus change in inventory plus exports) can be taken as a measure of the foreign exchange inflow resulting from its operations during a period. Subtracting all foreign currency expenses of the enterprise during the same period, we can arrive at the enterprise's periodic local value added which is in essence its balance of payments effect on the host country's economy.

The host country expects the corporation to provide taxes to the government and to generate other economic activities in the national economy by providing employment to the country's labor force and by efficiently utilizing scarce resources. If the production process of a multinational enterprise is dependent upon the locally available resources, it will, instead of importing, buy local inputs. This would have a multiplier effect in the process of economic development through the creation of employment opportunities in other sectors of the economy. Therefore, it is important for the public policy makers in developing host countries to know what portion of the value of output of a multinational enterprise is spent for the purchase of goods and services inside the country. The distribution of local value added provides necessary information in this regard.

An important and much discussed issue relating to the balance of payments effects of private foreign investment is transfer pricing. The literature on the operation of multinational enterprises in developing countries contains empirical evidence on how these enterprises manipulate transfer prices (prices on transfer of goods and services between affiliates) to transfer funds clandestinely out of these countries.[25,29–32] Robock and Simmonds[33] commented:

"Insofar as transfer prices operate against the interests of any host country, such as the parent company charging high prices to its foreign subsidiary, the balance of payments gains from foreign investment are less, or losses more, than they would otherwise have been."

Developing countries do not generally have comprehensive and effective mechanisms to control transfer price manipulations. The performance of a multinational enterprise, as reported in the financial statements published in the developing host country, is thus likely to show a distorted picture of its efficiency. Empirical studies conducted by Plasschaert,[34] Lall,[30] Vaitsos,[25] and others showed that multinationals in developing countries have a tendency to manipulate transfer prices by over-invoicing intra-group imports and by under-invoicing intra-group exports. Therefore, the method of calculating local value added, where all import payments are subtracted from gross output, provides a better measure of a multinational enterprise's operational efficiency. Because all import payments will be subtracted, the local value added number will be free from any effects of manipulations in transfer prices of imported goods and services, and manipulations (under-invoicing) in export prices will lower the reported local value added of a multinational enterprise.

The basic equation for computation of local value added (LVA) is as follows:

$$LVA = (SR + CI) - (IP + RP + OPF + DIA)$$

where SR is sales revenue (gross) consisting of local sales and FOB value of exports;
CI is change in inventory;
IP is import payments (CIF — cost, insurance and freight — value) for raw materials and other inputs;
RP is royalty payments to parent and/or other foreign parties;
OPF is other payments to foreigners for services or equity and loan capital;
DIA is depreciation on imported (fixed) assets.

If a multinational enterprise overprices imported inputs, and underprices exported outputs, local value added will be understated. If the production process of the enterprise is more import based, and if imported high-cost and high-technology assets are extensively used, that will result in a lower level of local value added. If in these circumstances, the estimate of local value added is used by the host country as a measure of the multinational's efficiency, the enterprise will not be seen to be adding real benefits to the economy of the host country.

The Local Value Added Statement

The discussion in the above section suggests that political participants in a developing host country can obtain useful information from the local value added statement of a

Table 2. XYZ Pharmaceutical (Bangladesh) Limited, Local Value Added Statement; Year to December 31, 1987

	(in '0000 units of Bangladesh currency)			
Creation of Local Value Added				
Output:			447,157	100
Sales revenue	431,767			
Change in inventory	15,390			
Deduct:				
Import of raw materials and intermediate goods		215,320		
Royalty, fees to foreigners		13,943		
Salaries to foreign personnel		900		
Interest on foreign loans		5,887		
Depreciation on imported fixed assets		7,400		
Dividend to foreign shareholder(s)		11,400		
			(254,850)	-57
Local value added			192,307	43
Distribution of Local Value Added				
Wages and salaries to local employees			52,017	27
Local raw materials and intermediate goods			70,773	37
Local finance charges and interests			10,053	5
Local capital consumption (depreciation)			2,710	1
Other local expenses			28,850	15
Tax payments			12,800	7
Profit distribution to local equity holders			4,916	3
Retained profits			10,188	5
Local value added			192,307	100

multinational enterprise. An attempt is made in this section to prepare the local value added statement of a typical multinational pharmaceutical company in Bangladesh. As necessary information for the preparation of the local value added statement was not available in the published financial statements, additional information was collected from the company. The name of the company remains anonymous for reasons of confidentiality.

The local value added statement of XYZ Pharmaceutical (Bangladesh) Limited is shown in Table 2. The first part of the statement shows the creation of local value added, and the second part shows its distribution. The form and content of the local value added statement presented in Table 1 follow the structure of the double-entry system so that the creation of local value added equals the distribution of local value added.

One fundamental measurement issue that concerns the temporal recognition of local value added is whether it should be calculated at the time of production or sale. If measurement is to be production oriented, then the emphasis must be on the value of output for the period, irrespective of whether it has been sold. This will give a correct picture of the "local wealth creation" by the enterprise. Therefore, it will be necessary to value the stocks of finished goods and work in progress at market selling prices, to place a sales value on total or gross output for the period. Also necessarily included will be the value of the fixed assets manufactured by the firm for its own use.

In addition to the question of temporal recognition of local value added, there is the perhaps more significant issue of why depreciation on imported fixed assets

should be treated as an external cost. In the context of the value added statement in the United Kingdom, *The Corporate Report* (Ref.12, p. 50) suggested that the depreciation of fixed assets should not be treated as an external cost but as a distribution of value added to be reinvested. In the present context, however, where the objective is to estimate "local wealth creation" by an enterprise, depreciation only on locally purchased and/or manufactured fixed assets should be treated as a distribution of local value added.

All other items that have been subtracted from output in the first part of local value added statement involve payments in foreign exchange for the use of goods and services during the period. All such payments should be measured on an accrual basis. In the local value added statement of XYZ Pharmaceutical (Bangladesh) Limited salaries to foreign personnel were paid in foreign exchange. However, in some cases, foreigners working in a multinational enterprise may receive all or part of their salary in local currency. In such a circumstance the local-currency payments should not be treated as an item of deduction in the first part of the local value added statement.

As in the first part, measurements in the second part of the local value added statement are also made on an accrual basis. The second part — distribution of the local value added amount — shows how the host country's economy has been rewarded by the operations of the multinational enterprise.

Specific Uses

(1) The information on local value added would be most useful to the government policy-makers and national planners in developing countries. The government may decide on a cut-off point of local value added as a percentage of total value of output. Multinational enterprises crossing this cut-off point may qualify for various incentives. In 1960 the Board of Investment in Thailand began to use a merit ratio system for granting promotional status to both foreign and domestic enterprises. This merit ratio system essentially involves the computation of a "value added to national economy" amount (Ref.35, pp. 40–41). The national planners can use the information on distribution of local value added to assess the multinational's contribution to various factors of production in the national economy. This information can also be used by the planners to analyze the multinational's role in generating economic activities in other sectors.

(2) The information contained in a local value added statement would be useful to the local employees and trade unions in the process of collective bargaining. For example, a low level of local value added and a relatively high level of import payments for goods and services in consecutive years would signal the possibility of a company's inability to pay higher wages in the future. Moreover, such a situation may indicate that the company is contemplating relying more on imported goods and services for any future market expansion in the host country. This type of information would be very useful to the employees and trade unions in assessing the job security of the existing employees and in predicting the employment opportunities for the potential employees. If a multinational enterprise reports a relatively high level of local value added, the employees and trade unions may consider this as an indication of the possibilities of greater job security and better wages.

(3) The political pressure-groups and other social forces would be able to understand from the local value added statement the extent of contributions made by the multinationals in the process of national economic development. Based on the information on local value added created by an individual multinational enterprise, the political and social activists would be able to decide their future course of action concerning the enterprise. These parties may have a sympathetic attitude to the reporting of higher levels of local value added by the multinational enterprise.

Multinationals' Benefits

A multinational enterprise intending to produce a local value added statement would not need to incur any extra cost for information collection for this purpose. All the information used in preparing the local value added statement will be readily available from the existing books of account. This statement, as a supplementary report to the traditional financial statements, is expected to provide valuable information to the dominant constituencies in a developing host country. This would, in turn, help the multinational to reduce "political costs" that might arise because of misconceptions in the minds of the constituencies regarding the real economic contributions made by the enterprises concerned.

Multinational enterprises in developing countries are often attacked by political pressure-groups on the basis of the allegation that these enterprises take out of the country more resources than they put in. This kind of general allegation may not be true for those enterprises that do not engage in a clandestine transfer of resources from host countries. To avoid political risk, multinationals, therefore, need to demonstrate that they are "good citizens" and are trying to contribute to the economic development process of the country. The local value added statement, by describing the creation and distribution of locally created wealth, would allow a multinational enterprise to show its role in the process of wealth creation in the host economy. The information on the distribution of local value added to the local suppliers of goods and services would indicate the extent to which the operation of a multinational helps in creating economic activities in other sectors of the local economy. Dissemination of this kind of information can be expected to allow multinationals to reduce conflicts with host countries and thereby to receive favorable treatment from the political participants whose decisions might affect their business operations.

Conclusion

If the objective of the dominant "user group" in a developing country is to assess the economic impact of a multinational enterprise, the information requirements may be expected to be served to a great extent by the inclusion of a local value added statement in the annual report of the enterprise. The local value added denotes wealth created by the enterprise within the national economy during a particular period. The author suggests that the information disseminated by local value added statements of multinational enterprises would enable the constituencies to analyze the contributions

of these enterprises to the process of national economic development, and that such an analysis is important in making decisions on the control measures or the investment incentives for multinational enterprises. The paper provides a direction for further empirical research on the external information needs and disclosure requirements from multinational enterprises in developing host countries.

Although the arguments in this paper focus on the information needs of the political participants in developing countries, similar arguments can be advanced in the context of developed countries. Many politicians and political pressure-groups in the United States in recent years have expressed their concerns on the economic effects of the foreign companies (especially Japanese companies) operating in the United States. Because of similar concerns, there was growing opposition to investment from abroad in Canada and Australia in the 1920s and 1930s. The same was true in Europe in the 1950s, when American inflows of private foreign investments were at their peak and European outflows were still negligible. The local value added statement prepared by a multinational enterprise could be useful in both developed and developing host countries.

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Non-Compliance with Disclosure Requirements in Financial Statements: The Case of Hong Kong Companies

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Abstract: *The Hong Kong economy and particularly its Stock Exchange have been active participants in the recent world-wide financial market expansion. The question on non-compliance with disclosure requirements in the financial statements of Hong Kong companies provides an opportunity to study the accounting disclosure requirements and their application in a major financial market. This research included the analysis of selected financial reports of Hong Kong companies and compared the degree of compliance to existing financial regulations as well as the standard accounting practices of the Hong Kong Society of Accountants. Various disclosure deficiencies were identified and possible reasons for those continuing deficiencies were given.*

For many companies in Hong Kong, particularly those whose shares are listed on the Stock Exchange, the day-to-day management is in the hand of the directors and officers. The majority of the shareholders, who own the companies, have little or no influence on the management of the companies. It is important for the shareholders to receive, on a regular basis, information disclosing the details of the company's financial position and results of operation, to allow them to judge the performance of the directors and officers. Such information is provided by means of the annual financial statements of the company.

In this connection, section 123 of the Companies Ordinance of Hong Kong, Chapter 32, provides that every balance sheet of a company must give a true and fair view of its state of affairs as of the end of its financial year, and that every profit and loss

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account of a company must give a true a fair view of its profit and loss for the financial year. Also, corporate financial statements must comply with the requirements of the Tenth Schedule to the Companies Ordinance. In addition, the Statements of Standard Accounting Practice (SSAP), issued by the Hong Kong Society of Accountants (HKSA), should be applied to all financial statements intended to give a true and fair view of financial position and results of operation. For companies with shares listed on the Stock Exchange in Hong Kong, their annual accounts must also include information stipulated by the Securities (Stock Exchange Listing) Rules 1986.

The directors of a company have legal responsibility to prepare financial statements in accordance with statutory requirements. In view of the need for public disclosure, it is not sufficient for the company's directors simply to produce accounts as a record of their own stewardship. To ensure fairness and dependability, section 131 of the Companies Ordinance requires every company to appoint independent auditors to report on the accounts to the shareholders. The Companies Ordinance further stipulates in section 140 that an auditor must be a person qualified for such an appointment under the Professional Accountants Ordinance, Chapter 50.

In spite of the attest function provided by auditors, non-compliance with disclosure requirements does exist. This can be demonstrated by the work of the Accounting Standards Committee (ASC) of the HKSA, which has performed regular reviews of selected published financial statements. The reviews form part of the process whereby the HKSA monitors its members' professional standards and the effectiveness system of the self-regulation. The ASC examines financial statements to identify what appear to be *inter alia*:

(1) breaches or non-observance of the Companies Ordinance; and
(2) non-compliance with the SSAP.

When the ASC identifies apparent errors or irregularities, it selects one of the following responses as appropriate:

(1) to write to the auditors, drawing their attention to the matter, in the expectation that the errors or irregularities will not be repeated in other financial statements; or
(2) if the matter is sufficiently material and serious, or particularly confusing, to write to the auditors, asking for a written explanation.

The ASC reviewed 118 sets of financial statements in 1986 (79 sets in 1985 and 63 sets of 1984), and noted certain areas of non-compliance with the SSAP or the Companies Ordinance.

Purpose of the Study

Based on the reviews performed by the HKSA as a pilot test, the authors intend to perform a more comprehensive research effort, in which the quality of disclosure in the annual reports issued by selected Hong Kong listed companies will be examined. As such, this research study has the following objectives:

(1) to identify the significant areas in which the financial statements of Hong Kong listed companies do not comply with the Companies Ordinance and the Securities Ordinance;
(2) to identify the significant areas in which the financial statements of Hong Kong listed companies depart from SSAP issued by the HKSA;
(3) to review the causes of the non-compliance as mentioned above;
(4) to review whether the non-compliance is related to the size of the listed companies;
(5) to review whether the non-compliance is related to the nature of business of the list companies;
(6) to review whether the non-compliance is related to the size of the auditing firm;
(7) to suggest certain possible approaches to remedy the situation.

Corporate reports have taken a public character and have become the basic data for investors, creditors, and government. The SSAP and statutory requirements become guide-lines of fair reporting in the midst of a set of flexible rules and techniques. In this situation, the need to comply with a consistent framework of accounting standards is evident. The importance of this research is that by identifying the causes for departures from these requirements, some insights into solving the problem of non-compliance may be noted, so that future financial statements may furnish more dependable and relevant information.

Literature Review

G.D. Donleavy[1] commented that the lack of a conceptual framework to raise the level of accounting standards had been widely lamented in academic accounting literature. The Trueblood Report in the United States and the Corporate Report in the United Kingdom were both widely praised for their attempts to build the foundations of such a framework, but they were widely ignored — especially by bodies involved in setting accounting standards.

The lack of progress in evolving a theoretical basis for setting and harmonizing standard, however, would matter little, even in the United States or the United Kingdom spheres of accounting influence, if the annual accounts had no user effects. Evidence on the user effects of the annual accounts is conflicting.

Lee and Tweedie[2] found that most of the UK investors in their sample read the company reports. The Stockholders of American Inc.[3] found that 85 percent of their investor respondents read company reports. Conversely, Epstein[4] found that only 15 percent relied on the advice of brokers. In 1983, Baker and Haslem[5] conducted a survey of common stock investors in metropolitan Washington, DC. The findings indicated that 46.8 percent of the 775 respondents considered stockbrokers and advisory services as their most important sources of information for investment analysis, and only 7.9 percent relied on financial statements. Baker and Haslem interpreted this to indicate that individual investors relied heavily on investment information other than that provided by financial statements. They noted also that financial analysts placed much greater emphasis on financial statements as a source of information because of

the analysts' greater ability to interpret the statements. In 1981, Chang and Most,[6] who surveyed investors in the United States, United Kingdom and New Zealand, concluded that financial statements were an important source of information for investment decisions, especially for institutional investors and investment analysts.

In 1982, Hylas and Ashton[7] performed an empirical study and found 281 errors in 152 audits. The study revealed the areas in which the errors occurred, the audit procedures which initially signalled their existence, and their apparent causes, whether intentional or unintentional.

The results of the study suggested that the errors in financial statements, almost all of which were unintentional, were concentrated in relatively few audit areas and these areas were fairly predictable by industry. The great majority of such errors affected income, but the direction of effect could be either an overstatement or understatement of income. Client personnel problems, such as inexperience, incompetence, and insufficient knowledge of accounting, were instrumental in causing most of the errors. A large proportion of financial statement errors were initially signalled by less rigorous audit procedures such as analytical review.

In 1985, Chow and Wong-Boren[8] performed an empirical study on voluntary financial disclosure practices of Mexican corporations and related the extent of disclosure to firm size, financial leverage, and proportion of assets in place. The study consisted of an overview of Mexican accounting and disclosure regulations, which showed a more laissez-faire environment than that in the United States. The results of the study indicated that the extent of voluntary disclosure increased with firm size, and no significant effects related to the financial leverage of assets were observed.

The only studies were the regular reviews by the HKSA in Hong Kong on departures from disclosure requirements of selected published financial statements. In addition to the objectives mentioned above, the ASC attempted to identify those areas where accountants and auditors had experienced difficulties in interpreting or complying with Hong Kong accounting standards and company law. The results of the reviews suggested that there was a general improvement in compliance with both statutory requirements and accounting standards over the past 5 years. However, members of the HKSA were reminded that there were still some areas where compliance was unsatisfactory. They were urged to make every effort to improve this situation. The HKSA admitted in its 1987 Annual Report that its review process should have been extended and that it should have been conducted by a separate committee exclusively dedicated to this task.

Research Methodology

The HKSA Review Process Reports for 1984, 1985, and 1986, published in the Society's Newsletters, were reviewed to identify the significant areas of errors or irregularities in the financial statements. The analysis served as a pilot test for this research project. The particular requirements which appeared to have caused difficulties in the reporting of some companies may be summarized as follows:

(1) disclosure of accounting policies,
(2) extraordinary items,
(3) statement of changes in financial position,
(4) depreciation accounting for fixed assets,
(5) group accounts,
(6) post balance sheet events and contingencies,
(7) earnings per share,
(8) directors' report,
(9) audit report, and
(10) disclosure required by the Companies Ordinance.

A list of all the public companies whose shares were listed on the Stock Exchange in Hong Kong as of July 31, 1987, was prepared from the *Securities Bulletin*, August, 1987. There were approximately 260 listed companies. A letter was sent to each of the companies requesting a copy of the company's annual report for the financial year ended during the period July 1, 1986—June 30, 1987. A reminder letter was sent to those companies which did not respond by 1 month after the expected date of return. By December 31, 1987, 217 copies of annual reports were received.

To examine the annual reports of all respondent companies was considered too time-consuming. A sample of 76 of the 217 annual reports received was selected. The companies were selected on the basis reported in Table 1.

The objective of the Hang Seng Index is to provide an index representative of all listed companies in Hong Kong. Therefore the Hang Seng Index constituent stocks were selected first. Twenty-five companies were selected at random from the 33 constituent stocks. The remaining 51 companies were then randomly selected from the various business sectors in a proportion of approximately 30 percent of the total number of companies in each sector. The total sample of 76 companies was considered representative of all listed companies in Hong Kong.

Table 1. Sample Size and Sample Distribution by Business Sector

	Total no. of respondent companies (i.e., no. of annual reports received)			No. of companies selected		
	Hang Seng Index constituent stocks	Non-Hang Seng Index constituent stocks	Total	Hang Seng[a] Seng Index constituent stocks	Non-Hang[a] Seng Index constituent stocks	Total
1. Finance	3	21	24	3	7	10
2. Utilities	4	2	6	3	1	4
3. Property	8	92	100	8	19	27
4. Consolidated enterprises	6	1	7	5	1	6
5. Industrials	5	66	71	5	20	25
6. Hotels	2	7	9	1	3	4
Total in number	28	189	217	25	51	76
Total in percent	100%	100%	100%	89%	27%	35%

[a]Selection was based on random sampling.

The 76 financial statements were reviewed carefully to identify the significant areas of non-compliance with the Companies Ordinance, the Securities Ordinance, or the SSAP. Regarding the various disclosure requirements, the examination focused on those areas previously mentioned and those which were believed to be important for a proper understanding of the financial statements.

To help in the review of the financial statements, an internal checklist provided by the local office of a Big-Eight CPA firm was used. The list contained all the material disclosure requirements of the Companies Ordinance and the SSAP. Concerning the Securities Ordinance requirements, the Undertaking prescribed under the Securities (Stock Exchange Listing) Rules 1986 was used as a point of reference.

Errors or irregularities were summarized and are reported in the various tables. The effects of such errors or irregularities on the financial statements were considered in terms of the extent to which the financial position and the results of operation were distorted. The relationships between the errors or irregularities and the size of the companies, their business sectors, and the size of the auditing firms were reviewed. The causes of the non-compliance were identified by interviewing five company executives and seven audit managers of CPA firms. Conclusions based on the findings and recommendations to remedy the situation of departures from disclosure requirement were made.

Findings

As shown in Table 2, the overall non-compliance rate among the 76 firms was 22 percent. This ranged from a high of 49 percent non-compliance for the requirement for depreciation accounting for fixed assets to a low of 4 percent for extraordinary

Table 2. Overall Situation of Departures from Disclosure Requirements

	Compliance		Non-compliance		Total	
	No.	%	No.	%	No.	%
(a) Disclosure of accounting policies	54	(71)	22	(29)	76	(100)
(b) Extraordinary items and prior year adjustments	73	(96)	3	(4)	76	(100)
(c) Statements of changes in financial position	69	(91)	7	(9)	76	(100)
(d) Depreciation accounting for fixed assets	39	(51)	37	(49)	76	(100)
(e) Group accounts and associated companies	66	(87)	10	(13)	76	(100)
(f) Post balance sheet events and contingencies	57	(75)	19	(25)	76	(100)
(g) Earnings per share	68	(89)	8	(11)	76	(100)
(h) Directors' report	48	(63)	28	(37)	76	(100)
(i) Audit report	64	(84)	12	(16)	76	(100)
(j) Disclosure required by Companies Ordinance	72	(95)	4	(5)	76	(100)
(k) Others, such as related party transactions, typographic errors, provisions, etc.	45	(59)	31	(41)	76	(100)
Total	655	(78)	181	(22)	836	(100)

items and prior year adjustments. Cases of non-compliance with statutory and/or professional requirements were analyzed to determine whether they seemed to relate to the size of the company, the business sector of the company, or the audit firm.

The Relationship Between Size of Company and Non-Compliance

Some have suggested that larger firms will tend to provide fuller financial disclosure and therefore cause less non-compliance. One reason suggested is that collecting and disseminating information is a costly exercise and the larger firms can best afford such costs. Large firms are likely to collect the information needed for corporate report disclosure in the operation of their internal management systems. Thus, little extra cost may be incurred. A second reason suggested is that larger firms tend to go to the stock market for financing more often than do smaller firms. As a result, they may find it in their interest to disclose as much as required by statutes in the annual reports. Another reason suggested is that smaller firms may feel that fuller disclosure of their activities will put them in a competitively disadvantageous position with larger companies in their industry. They may disclose less information than larger firms.

The size of the sampled companies can be measured by the following four bases: turnover, profit before extraordinary items, market capitalization, and shareholders' funds. Because banking, shipping, and private companies are specifically exempted by the Companies Ordinance from disclosure of turnover amounts, it is impossible to use this measure as a basis of comparison. As only a single year's result was used, it was considered inappropriate to use profit before extraordinary items to measure the company's size. Market capitalization at the respective balance sheet date is subject to short-term market price fluctuations in terms of individual stocks. Of the four bases shareholders' funds (stockholders' equity) is considered the most appropriate basis for measuring the size of the sampled companies because both the net asset backing and the undistributed cumulative profitability attributable to shareholders are considered.

The association between the size of the firms and the departures from disclosure requirements is shown in Table 3. A non-compliance percentage for each cell of the table was computed and ranked within each block (a)–(k). The Friedman two-way analysis of variance by ranks was then employed to test the possible relationship between size of the firms and departures from disclosure requirements. At both the 90 and 95 percent levels, a significant difference was found. The results indicated that smaller companies (less than HK$5 million in shareholders' funds) and larger companies (more than HK$500 million in shareholders' funds) have significantly less non-compliance than medium-sized companies (between HK$5 million and the HK$500 million in shareholders' funds). This phenomenon is interesting and will be explained in a later section.

The Relationship Between Business Sector and Non-Compliance

Business sectors were classified according to the Sectorial Indices of the Hong Kong Index. The 76 sampled companies were classified into six sectors, as shown in Table 4. The results revealed that 44 percent of all the departures detected occurred in

property companies, 26 percent in industrial companies and 13 percent in finance companies.

As for the previous table, a non-compliance percentage for each cell was computed and ranked within each block. The results of the Friedman two-way analysis of variance by ranks test indicated that, at both the 90 and 95 percent confidence level, no significant difference was found among the business sectors; there seemed to be no relationship between business sector and non-compliance.

The Relationship Between Auditors and Non-Compliance

The primary responsibility for preparing the annual report rests with the company. The company's auditors, however, may exercise some influence or provide some advice on the level of disclosure as required. Specifically, it could be argued that larger, more well-known auditing firms may be able to exercise greater influence and

Table 3. The Relationship between the Size of the Companies[a] and Departures from Disclosure Requirements

	No. of companies													
	Negative to HK$5 (million)		HK$6 to HK$50 (million)		HK$51 to HK$100 (million)		HK$101 to HK$500 (million)		HK$501 to HK$1,000 (million)		Over HK$1,000 (million)		Total	
	C[b]	N[c]	C	N	C	N	C	N	C	N	C	N	C	N
(a) Disclosure of accounting policies	5	1	9	4	7	2	13	8	10	0	10	7	54	22
(b) Extraordinary items and prior year adjustments	6	0	13	0	8	1	19	2	10	0	17	0	73	3
(c) Statements of changes in financial position	6	0	11	2	7	2	20	1	8	2	17	0	69	7
(d) Depreciation accounting for fixed assets	5	1	8	5	5	4	7	14	7	3	7	10	39	37
(e) Group accounts and associated companies	6	0	13	0	8	1	16	5	6	4	17	0	66	10
(f) Post balance sheet events and contingencies	5	1	10	3	4	5	17	4	8	2	13	4	57	19
(g) Earnings per share	6	0	11	2	7	2	18	3	10	0	16	1	68	8
(h) Directors' report	4	2	8	5	4	5	10	11	8	2	14	3	48	28
(i) Audit report	4	2	9	4	7	2	18	3	10	0	16	1	64	12
(j) Disclosure Required by Companies Ordinance	6	0	12	1	9	0	19	2	9	1	17	0	72	4
(k) Others, such as related party transactions, typographic errors provisions, etc.	5	1	5	8	2	7	14	7	8	2	11	6	45	31
Total	58	8	109	34	68	31	171	60	94	16	155	32	655	181

[a]The size of the sampled companies is measured by their shareholders' funds.
[b]C = Compliance with disclosure requirements.
[c]N = Non-compliance with disclosure requirements.

hence they may be associated with higher disclosure levels. Previous empirical studies have shown that larger auditing firms were significantly associated with better quality of audits and disclosure.[9]

Six major auditing firms were engaged by our sampled companies: four international Big-Eight firms and two local firms. Other auditors were collectively categorized into "other local firms."

The association between auditors and departures from disclosure requirements is shown in Table 5. The results of the Friedman two-way analysis of variance by ranks indicated that, at both the 90 and 95 percent levels, there was no significant difference in the disclosure departures between companies audited by international Big-Eight auditing firms and those audited by smaller local firms. Auditors appeared to have little influence on the levels of disclosure made by companies in their annual reports.

Possible Interrelationships among the Three Factors

Possible relationships between each pair of factors (company size, business sector, and auditor) was tested using the chi-square test of independence. The tests were

Table 4. The Relationship between Business Sectors and Departures from Disclsoure Requirements

	No. of companies													
	Finance		Utilities		Property		Consolid. Enterprises		Industrials		Hotels		Total	
	C	N	C	N	C	N	C	N	C	N	C	N	C	N
(a) Disclosure of accounting policies	3	7	2	2	19	8	4	2	22	3	4	0	54	22
(b) Extraordinary items and prior year adjustments	10	0	4	0	26	1	6	0	23	2	4	0	73	3
(c) Statements of changes in financial position	9	1	4	0	24	3	6	0	23	2	3	1	69	7
(d) Depreciation accounting for fixed assets	6	4	1	3	13	14	1	5	17	8	1	3	39	37
(e) Group accounts and associated companies	9	1	4	0	25	2	6	0	19	6	3	1	66	10
(f) Post balance sheet events and contingencies	9	1	4	0	16	11	5	1	20	5	3	1	57	19
(g) Earnings per share	10	0	4	0	22	5	5	1	23	2	4	0	68	8
(h) Directors' report	8	2	2	2	14	13	5	1	15	10	4	0	48	28
(i) Audit Report	9	1	4	0	21	6	4	2	22	3	4	0	64	12
(j) Disclosure Required by Companies Ordinance	9	1	4	0	26	1	6	0	24	1	3	1	72	4
(k) Others, such as related party transactions, typographic errors, provisions, etc.	4	6	2	2	12	15	5	1	20	5	2	2	45	31
Total	86	24	35	9	218	79	53	13	228	47	35	9	655	181

Business sectors are classified according to the Sectorial Indices of Hong Kong Index.
C = Compliance with disclosure requirements.
N = Non-compliance with disclosure requirements.

performed to detect any possible association between any pairs of factors. Results of the three pair-wise chi-square tests indicated that all the factors are independent of each other in terms of non-compliance with disclosure requirements.

Causes of Non-Compliance

In view of the high frequency of non-compliance with disclosure requirements, an attempt was made to investigate the causes of these non-compliance situations.The review was performed by means of an interview survey with five company executives and seven audit managers of auditing firms.

Table 5. The Relationship between Auditors and Departures from Disclosure Requirements

	No. of companies																	
	Big-Eight Firm no.1		Big-Eight Firm no.2		Big-Eight Firm no.3		Big-Eight Firm no.4		Other International Firms		Local firm no.1		Local firm no.2		Other Local Firms		Total	
	C	N	C	N	C	N	C	N	C	N	C	N	C	N	C	N	C	N
(a) Disclosure of accounting policies	12	4	18	5	3	1	2	2	2	1	11	4	3	1	3	4	54	22
(b) Extraordinary items and prior year adjustments	16	0	22	1	4	0	4	0	3	0	13	2	4	0	7	0	73	3
(c) Statements of changes in financial position	15	1	22	1	3	1	4	0	3	0	13	2	4	0	5	2	69	7
(d) Depreciation accounting for fixed assets	10	6	11	12	1	3	2	2	2	1	7	8	2	2	4	3	39	37
(e) Group accounts and associated companies	14	2	18	5	4	0	3	1	2	1	14	1	4	0	7	0	66	10
(f) Post balance sheet events and contingencies	13	3	20	3	3	1	2	2	2	1	10	5	3	1	4	3	57	19
(g) Earnings per share	15	1	19	4	4	0	3	1	3	0	14	1	4	0	6	1	68	8
(h) Directors' report	13	3	14	9	3	1	3	1	1	2	9	6	3	1	2	5	48	28
(i) Audit report	14	2	22	1	2	2	4	0	2	1	11	4	2	2	7	0	64	12
(j) Disclosure Required by Companies Ordinance	16	0	22	1	4	0	4	0	3	0	14	1	4	0	5	2	72	4
(k) Others, such as related party transactions, typographic errors provisions, etc.	10	6	16	7	2	2	2	2	2	1	9	6	2	2	2	5	45	31
Total	148	28	204	49	33	11	33	11	25	8	125	40	35	9	52	25	655	181

C = Compliance with disclosure requirements.
N = Non-compliance with disclosure requirements.

Views of Company Executives

Executives from five listed companies were interviewed. They were financial controllers or accounting managers of the selected companies. According to the interviewees, they had to prepare the financial statements in accordance with the disclosure requirements imposed on companies by the Companies Ordinance, the SSAP, and the Securities (Stock Exchange Listing) Rules 1986. As all these requirements were amended and revised from time to time, the executives could not cope with the up-to-date requirements, and this situation was reflected in their financial statements. In addition, difficulties were occasionally experienced in interpreting and applying the Companies Ordinance and the SSAP.

Furthermore, there were costs to companies to comply with the required disclosure. The costs included the additional expenses of keeping records and organizing accounting data and would not have been incurred in the absence of the disclosure statutes. In particular, the Stock Exchange's disclosure requirements call for publication of more data than are required by the Companies Ordinance.

The interviewees further commented that many public companies obtained the services of outside directors who did not have time to review the financial statements prepared by the company's officers. The directors signed the statements finalized by the officers without knowledge of the errors or irregularities. The departures were released to the public unnoticed.

An interviewee remarked that he prepared the financial statements in accordance with the directives as stipulated by the overseas holding company rather than the local statutory requirements, although compliance with the holding company's accounting directives would ensure compliance with the Hong Kong disclosure requirements in all material respects. As long as the holding company accepted his financial statements, he did not concern himself with the quality of disclosure in the local statutory accounts. He was always prepared to accept a qualified audit report in this respect.

A financial controller observed that there was a trend for large public companies to increase the level of voluntary disclosure. There were three key areas where disclosure was increasing:

(1) social responsibility disclosure — such information included environment, fair business practices, community involvement, etc.;
(2) simplified report — these involved the use of graphical and narrative explanations to communicate selected aspects of the financial statements;
(3) analysis of shareholdings — these commonly reported the number and type of shareholders and the size of their holding.

In the future, we can expect companies to become increasingly aware of the benefits of the adoption of specific disclosure practices.

Views of Auditors

Five audit managers from two Big-Eight accounting firms and two audit managers from local accounting firms were interviewed. According to the interviewees, a large

proportion of the departures from disclosure requirements were caused by insufficient accounting knowledge of the clients, including an insufficient awareness of general accounting concepts and the requirements of the Companies Ordinance. Other types of clients' personnel problems, such as staff turnover, engagement of new or inexperienced employees, carelessness, incompetence, and time pressure, also caused errors in financial statements. The managers emphasized the importance of evaluating client's personnel before determining the extent of reliance on internal control and the amount of detailed testing to undertake.

There were errors which were considered by the auditors to have been purposely caused by client management or employees. These usually occurred in small companies and involved attempts to improve the appearance of the companies' financial position and results of operations.

The interviewees remarked that the principal action an auditor could take if he disagreed with the content of a company's accounts was to 'qualify' the audit report. The wording of various qualifications was suggested by the auditing guidelines issued by the HKSA. Because of the difficulties encountered by some auditors in interpreting the guidelines, however, qualifications were sometimes hard to identify in an audit report and might be misinterpreted by non-expert readers. The vast majority of audit qualifications resulted in the 'subject to' or 'except for' reports, but the reports would usually state that the accounts show a true and fair view. There might be no adverse reaction to the accounts as perceived by users.

The managers also commented that the threat of a qualified audit report did not constitute an effective incentive to comply with professional regulations because many company managements were prepared to accept qualification for non-compliance with accounting standards. Three audit managers claimed that more departures would be found in companies which engaged small local auditing firms, though such a comment was not explicitly endorsed by the interviewees from other local firms. The small firms did not have sufficient human and financial resources to keep abreast of the ever-changing disclosure requirements. In those firms, it was very likely that only the audit partners were licensed accountants who, however, were unable to spend their valuable time in studying the implications of all the new accounting standards, amendments to the companies Ordinance and Stock Exchange rules. As such, departures from disclosure requirements were likely to occur in their client's financial statements. On the contrary, large public accounting firms established well-organized professional practice departments and technical advisory departments to deal with the technical aspect of the financial statements. Full-time licensed accountants were employed in those departments to be aware of the development of the disclosure requirements. They rendered technical advice to their colleagues by means of circulars, seminars, and personal consultations to ensure that all the financial statements complied with statutory, accounting and Stock Exchange requirements.

The interviewees further commented that despite the above reasons, the small auditing firms were still engaged by companies simply because their audit fees were relatively low, as compared with those of large auditing firms. More importantly, the clients' financial statements received less " criticism" from small auditing firms than from the large ones. It was, therefore, not surprising to find that departures from disclosure requirements would occur in such financial statements.

Conclusions and Recommendations

The analysis of the annual reports revealed major departures from disclosure requirements of the HKSA, Companies Ordinance, and Securities Ordinance. Furthermore, the study indicated a significant relationship between the size of the companies and the departure from disclosure requirements. Large companies (shareholders' fund over HK$500 million) and small companies (shareholders' fund less than HK$5 million) had fewer departures than medium-sized firms (shareholders' funds between $5 million and $500 million).

Among the six business sectors, no significant difference in departure was found although it appeared that property companies might have more departures than other industries. With respect to the association of auditors and departures from disclosure requirements, no significant difference was found in departure from disclosure requirement between various sizes of auditing firms.

The causes on non-compliance with the various disclosure requirements were examined by means of an interview survey. The findings of the interviews suggested that the important causes of non-compliance were mainly:

(1) difficulties in interpreting the disclose requirements and auditing guidelines:
(2) insufficient awareness of general accounting concepts;
(3) lack of proficiency of staff;
(4) management intention to "improve" the appearance of the companies' financial position and results of operation; and
(5) lack of resources to keep abreast of the changes in the disclosure requirements.

The authors make the following recommendations to reduce non-compliances with disclosure requirements:

(1) Shareholders and other users of the financial statements rely on the auditors to examine the annual report of the companies. However, under the existing statutory requirements in Hong Kong, the directors' report can be published even though the contents are incorrect or even misleading. As such, we recommend that the directors' reports should be "reviewed" by the auditors for reasonableness and consistency with other financial information.
(2) As mentioned by interviewees, some directors attempted to improve the appearance of the company's statements. The Companies Ordinance does not impose any penalty on the directors. It is recommended that certain punitive measure should be instituted against company directors for willful departures.
(3) Many errors in the financial statements were caused by carelessness, incompetence, and ignorance on the part of the accountants. These errors were not detected and reported by the auditors. The HKSA should require auditing firms to maintain quality control programs and provide a penalty for auditors whose work proves to be negligent or fraudulent.
(4) To improve the level of technical competence, the HKSA should strengthen its continuing professional education courses on new developments. It should also compile a checklist incorporating all the disclosure requirements. The checklist should be updated periodically and whenever new disclosure requirements are promulgated.

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Foreign Currency Accounting: A Review and Critique of Major Empirical Studies

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Key words: Accounting; Foreign currency; Positive theory; SFAS No. 8; SFAS No. 52

Abstract: *The development of positive accounting theory has had a significant effect on accounting research, including research on company behavior in lobbying on and responding to foreign currency translation accounting standards. This paper reviews, compares, and contrasts the methodologies used, variables studied, evidence presented, and conclusions drawn in major empirical studies by Griffin, Kelly, Ayres, and Salatka on SFAS Nos. 8 and 52. Thus, the paper summarizes empirical work on the choices made by multinational managers (1) in attempting to influence and (2) in acting to minimize the external reporting impact of two important accounting standards.*

Problems continue to surround foreign currency transaction accounting. In 1975, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard No. 8 (SFAS No. 8): "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements." This standard's contribution was to bring uniformity to accounting for the translation of foreign currency transactions and foreign subsidiaries. However, it required firms to use the temporal method of translation and to include unrealized foreign exchange gains and losses in income. This latter provision was expected by most managements to increase the volatility of their reported earnings. Corporate managements were concerned that, given the fluctuating realignments of currencies and the requirements to recognize unrealized exchange gains or losses in current income, there would be confusion regarding their price/earning multiples. Therefore, this standard became the focus of a great deal of criticism. As a result of these criticisms, in 1981 the FASB issued a revised foreign currency accounting standard (SFAS No. 52): "Foreign Currency Translation." One major difference between SFAS Nos. 8 and 52 is that gains and losses resulting from foreign currency translation would no longer flow through income. SFAS No. 52 required that these gains and losses be reported directly to owners' equity, bypassing the income statement.

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Although SFAS Nos. 8 and 52 were mandatory accounting changes, firms were given a range of adoption dates. Both standards were required to be adopted for fiscal years beginning on or after a specific date, but an earlier adoption date was encouraged. This means that foreign currency transaction accounting was one of the relatively rare areas where two sequential accounting standards within a short period of time and voluntary choices existed. Therefore, both SFAS No. 8 and No. 52 were the subject of a number of positive accounting theory studies.

This paper presents a review of the major studies that tested the empirical validity of hypotheses related to these two foreign currency transaction accounting standards. The paper compares and contrasts the specific factors chosen and the empirical results reported in four important foreign currency accounting studies.

The next section of the paper presents a rough classification of positive theory studies related to foreign currency accounting standards. Following is a review of positive accounting theory. Possible effects of SFAS Nos. 8 and 52 are then presented, and critiques of the major studies are given followed by a summary.

Classification of Previous Studies

To date, four important papers have been published which focus on the relationship between various corporate characteristics and the reactions of management or the reactions of stock market prices to SFAS No. 8 or No. 52. These papers can be roughly classified into two branches of positive accounting theory.

Papers included in the positive accounting theory of management action and reaction are those of Griffin,[1] Kelly,[2] and Ayres.[3] These studies attempted to explain or predict management preferences with respect to accounting rules. Factors affecting the welfare of management were identified and then evaluated empirically to determine whether they were helpful in predicting managements' decisions to respond to proposed changes in rules made by the accounting rule-making body (FASB). These studies are potentially valuable in assisting the accounting rule-making body to assess potential opposition to a standard, as well as subsequent attempts to circumvent reporting requirements, subvert the standard, and/or discredit the policymaker.

One paper in the positive accounting theory of stock market reaction is that of Salatka.[4] This work attempted to study the market's interpretation of alternative accounting policies. The initial distinction in this area of research, as indicated by Ricks,[5] was whether the particular accounting issue had "real economic consequences" or only so-called "cosmetic" features. This simple dichotomy has been substantially developed. Several developmental stages were depicted by Ricks:

"Initially it seemed that economic consequences were limited to those cases where the different accounting alternative had obvious cash flow implications (generally, tax consequences). More recently, economic consequences, as applied to alternative accounting policies, have come to include information production and processing costs, political costs, and the effects associated with various contractual relationships."[5]

Similarities can be observed among these four foreign currency accounting-related positive theory studies. Each of the researchers attempted to investigate various

independent variables in relation either to the actions taken by management or to securities market behavior. However, the particular factors examined in these studies have varied considerably. For example, Griffin argued that managers might prefer accounting standards that

"(1) present a fair statement of financial condition and performance to all users — present and potential, (2) maximize the wealth of the present shareholders, (3) maximize the market value of the firm's assets, (4) satisfy regulations, (5) maximize the utility of manager's pecuniary and non-pecuniary wealth, and (6) present numbers in conformity with generally accepted accounting principles, applied consistently over time."[1]

Griffin proposed that corporate managers act in a self-interested manner, preferring accounting proposals that enhance rather than diminish the utility of their wealth. In addition, Kelly[6] summarized and induced the factors that might affect the wealth changes of management, especially factors related to debt covenants or political costs.

Introduction of Positive Accounting Theory

This paper compares the various research approaches, independent variables used, and evidence presented in the above-mentioned four papers. However, studying and reviewing empirical research with only current-day interpretation of the results is somewhat limiting. Understanding how the theory has evolved contributes to an understanding of the conceptual underpinnings of these studies. Regarding the evolution of the positive accounting theory and its methodology, Watts and Zimmerman[7] provided a clear picture.

Evolution of Accounting Research

After the US Securities Acts of 1933 and 1934, accounting theorists became concerned with policy recommendations; they became more interested in what should be done. However, very little attention was paid to the empirical validity of the hypotheses on which the normative prescriptions were based. The introduction of large-scale empirical testing of hypotheses in economics and finance had an important impact on accounting research. In addition, the creation of large computer data bases and the availability of machinery to process this data further facilitated the empirical testing of hypotheses.

The results of early empirical studies led to the development of the efficient markets hypothesis. Tests of this hypothesis then produced results contrary to the hypotheses underlying accountants' normative prescriptions. These contradictions were observed by accounting researchers who were trained in the new research methods in finance, and those researchers then introduced the research methods of finance and the accompanying concepts of theory and methodology to accounting. Positive research and the concept of positive theory were eventually also introduced into accounting literature.

The Development of Positive Theory

Theory, as defined by Watts and Zimmerman, presents no rule for choosing among alternative accounting procedures. Rather, theory provides an explanation for accounting practices, explaining why some firms use one method and others use a different one.

A theory is formed by two parts: the assumptions, including the definitions of variables and the logic that relates to them, and a set of substantive hypotheses. The first part is used to organize, analyze, and understand the empirical phenomena of interest, and the second part gives the predictions generated from the analysis. As the development of a theory starts with the researcher thinking of an explanation for some phenomenon, we can infer that researchers are subjective in developing theory. The topics researchers choose to work on and the models they develop are influenced by the researchers' own values. However, if the phenomena the research addresses and/or the empirical results are interesting, other researchers will attempt to improve the original methodology, apply it to different phenomena, find and test other possible explanations for early results, and a literature will develop.

Nevertheless, theory is always far from complete and perfect. This is expected because theories are simplifications of reality and the world is complex and changing. Theorists attempt to explain and predict a class of phenomena and therefore attempt to capture in their assumptions the variables common to that class. As a consequence, facts particular to a given observation or subset of observations and not common to the whole class are ignored and are not incorporated into the theory's assumptions. This necessarily leads to a theory which does not explain or predict every observation or circumstance.

Because theories are imperfect and cannot be proven correct, competing theories necessarily arise. Competing theories play an important role in testing a hypothesis of a particular theory. There are always an infinite number of other possible variables that could be important. Advancing a competing theory can provide a way of deciding which variables to investigate other than those indicated by the original theory being tested. When competing theories exist, the variables which those competing theories suggest are important must be investigated; therefore, competing theories augment the development of theory in general.

Possible Effects of Foreign Currency Standards

Knowing the possible effects of mandatory accounting changes is essential for researchers to develop their own explanatory theories. This section will address the possible financial reporting effects of SFAS Nos. 8 and 52.

Effects of SFAS No. 8

Before SFAS No. 8, firms were allowed to choose from a wide range of methods of reporting the results of their multinational operations. Nevertheless, the vast majority of companies used translation methods that lessened the financial statement effect of fluctuating exchange rates and, at a minimum, deferred some portion of translation gains

or losses. SFAS No. 8 required all firms to use the temporal translation method and to include translation gains and losses in income. The major potential impacts of SFAS No. 8 were increasing debt-to-equity ratios, a negative effect on income, and decreasing working capital and working capital ratios. Salatka[4] provided the reasoning as follows.

Under SFAS No 8, multinational firms that had previously used historical exchange rates to translate foreign long-term debt were required to use current exchange rates. As the value of the US dollar declined relative to most foreign currencies both before and after the issuance of SFAS No. 8, the amounts of foreign long-term debt effectively increased, and the debt-to-equity ratios increased accordingly. This changed the foreign currency exposure of many multinational firms from a net asset position to a net liability position. Thus, the change resulted in negative currency translation adjustments to net income. Moreover, before SFAS No. 8, many firms had translated foreign inventories at current rates and translated foreign current debt at historical exchange rates. With all other factors remaining the same, changing from current rates to historical exchange rates resulted in a decrease in the translated inventory account. Changing the translation of current debt from historical exchange rates to current exchange rates resulted in an increase in current debt. The combined effect of these changes thus decreased working capital and working capital ratios.

Effects of SFAS No. 52

Under SFAS No. 8, certain balance sheet accounts (e.g., inventory and property) and related income statement accounts were translated at historical exchange rates. All translation adjustments were made directly to income. Under SFAS No. 52, balance sheet accounts are translated from the functional currency into US dollars at the current rate of exchange at year end. Income statement accounts are translated at average exchange rates for the year. The resulting translation adjustments are made directly to a separate component of owners' equity.

The earnings impact from using SFAS No. 52 is therefore affected by a foreign subsidiary's mix of monetary and non-monetary assets as well as the acquisition dates of inventory and depreciable assets. However, for the following two reasons, there is a general belief that most multinational firms yield higher income figures under SFAS No. 52 than under No. 8. First, as the value of the US dollar strengthened during most of 1981 and 1982, the cost of sales and depreciation expenses translated into fewer dollars under SFAS No. 52 than under No. 8. However, sales are translated at an average rate for the year under both standards. Second, under SFAS No. 8, subsidiaries in a net monetary liability (asset) position incurred translation gains (losses) on the balance sheet which flowed through income, but under SFAS No. 52, these gains and losses are made directly to owners' equity.[3]

Research Approaches of Major Studies

In this section we discuss how the samples were selected and the research methodologies used in the four papers reviewed here.

Samples

Griffin selected 452 firms as a sample, based on

(1) the 174 firms that submitted comments on SFAS No. 52 to the FASB,
(2) the 479 multinational firms used by Dukes[8] in his study of the security price effects of SFAS No. 8, and
(3) the firms listed on the Annual Industrials Compustat file which had one or more requisite data items available for 1976.

Of these 452 firms, 156 were SFAS No. 52 respondents and 296 were not.

Kelly's sample was composed of 195 firms reported in the American Institute of Certified Public Accountants' 1976 and 1977 editions of *Accounting Trends and Techniques,* which had to change their method of accounting for foreign operations in response to SFAS No. 8. However, some data for measuring the specified independent variables were not available for 25 of these firms; the final sample therefore consisted of 170 firms (54 lobbyers and 116 non-lobbyers).

Ayres' sample consisted of 103 firms adopting SFAS No. 52 in 1981, 91 firms adopting in 1982, and 38 firms adopting in 1983. She selected these firms based on all of the following criteria:

(1) firms listed in the 1981–1983 volumes of *Accounting Trends and Techniques* that reported the adoption of SFAS No. 52 in one of these years,
(2) firms using a December 31 fiscal year end,
(3) firms and financial data available on the Compustat Annual Industrial tape from 1979 to 1982, and
(4) firms with proxy statements and annual reports available on the National Databank Microfiche file for the year of adoption.

Salatka's sample consisted of 223 experimental firms (101 early adopters and 122 late adopters of SFAS No. 8). He selected these firms based on

(1) currency translation adjustments for 1976–1980 from the Value Line tape,
(2) monthly stock return data for 1976–1980 from a 1982 version of the CRSP Monthly Stock Return tape,
(3) annual sales data for 1976–1980 and the SIC code for 1976 from a 1982 Annual Compustat (Expanded) tape,
(4) returns data from 1982 and 1986 versions of the CRSP Daily Returns tape for 198 days before and 198 days after at least one of the event dates,
(5) complete data for each of the independent variables from the 1982 Annual Compustat tape,
(6) foreign sales data for 1976–1980 and at least eight quarters of earnings per share data both before and after adoption of SFAS No. 8 from the Value Line tape, and
(7) 10-K reports from 1976 to 1980.

Salatka's control firms had domestic operations only, and were chosen from the group of firms not listed in the *Directory of American Firms Operating in Foreign*

Countries. In addition, control firms satisfied the same constraints as experimental firms given in (2)–(5) above.

Methods

Univariate Tests

Griffin performed univariate F statistics to test for a significant relationship between the dependent variable and each separate independent variable. Kelly conducted univariate analysis by using *t*-tests on the group means of the independent variables. She further argued that

"the Mann–Whitney rank-sum test determines whether two independent groups have been drawn from the same population, and the Sign and Wilcoxon signed-ranks tests compare the difference in location of two populations based on paired observations. They are most commonly used alternatives to the parametric *t*-test."[2]

Therefore, Kelly also performed the nonparametric Mann–Whitney rank sum test and Sign and Wilcoxon signed-ranks tests to avoid assuming that the independent variables were normally distributed. A Mann–Whitney U-test was conducted by Ayres to provide a univariate test of the hypotheses. Salatka compared the independent variables of late adopters and early adopters by also using the Mann–Whitney test.

Multivariate Tests

In their research, Griffin used multivariate discriminant analysis, whereas Kelly and Ayres used the logistic model. One objective of adopting multivariate tests in this area of research is to examine whether general firm characteristics alone might be capable of providing a basis for discrimination.

Altman et al.[9] discussed statistical techniques associated with two-group problems — problems where the dependent variable can take on only two values (sometimes referred to as dichotomous, 0–1, or two-choice problems). They considered four different models appropriate for this type of problem: (1) linear probability model (regression); (2) probit model; (3) logit model; and (4) discriminant analysis model. They discussed each of these models in turn, focusing both on the assumptions and underpinnings of each model and on estimation issues.

Griffin[10] compared the characteristics of multinomial logit and linear discriminant analyses, and argued that

"Both multivariate procedures assume a dichotomous dependent variable. However, relative to logit analysis linear discriminant procedures impose much stronger demands on the data (e.g., group covariance matrixes of the independent variables should be equal, independent variables should be multivariate, normally distributed). Those assumptions are almost surely violated in practice. Discriminant analysis also requires an assumption about the prior probability of group membership. Multinomial logit analysis requires none of those assumptions. Moreover, with large samples, logit estimators are unbiased and asymptotically efficient."[10]

Table 1. Summary of Independent Variables and the Different Forms of Evidence Reported

	Griffin: Respondents to SFAS No. 52		Kelly: Lobbyers to SFAS No. 8		
	Univariate analysis	Discriminant analysis	Univariate analysis		Logit analysis and matched pairs
			Lobby owing to implementation	Lobby owing to income effect	Lobby owing to implementation
Leverage					
Long-term debt/equity	Lower	Vague			
Total debt/total asset			Insignificant	Higher	Insignificant
Book value of debt/ market value of common stock					
Beta coefficient	Insignificant	Vague			
Proxy of total risk					
Ratio of interest coverage					
Ratio of dividend to unrestriced retained earnings					
Working capital ratio					
Size					
Market value of common stock	Larger	Vague			
Book value of total assets			Larger	Larger	
Total assets					
Market value of common stock and book value of long-term debts					
Return (market return and total assets return)	Smaller	Vague			
Changes of foreign exchange adjustment	Smaller	Vague			
Percent change of foreign sales to total sales			Higher	Higher	
Percent change in pre-adoption EPS					
Percent change in the standard deviation of EPS					
Management's ownership percentage			Insignificant	Lower	Insignificant
Percentage of stock owned by directors and officers					
Response to SFAS No. 8	Earlier	Vague			
Management compensation agreement					

EPS = Earnings per share. WS = Weak support.

Table 1. Continued

	Ayres: Early adopter of SFAS No. 52		Salatka: Early adopter of SFAS No. 8	Both early and late adopters of SFAS No. 8 and exhibiting greater stock price decline
Lobby owing to income effect	Univariate test	Multivariate analysis	Mann–Whitney test	Cross-sectional test
Insignificant				
			Insignificant	Higher (WS)
			Insignificant	Higher (WS)
	Lower	Lower	Insignificant	Lower (WS)
	Higher	Higher	Insignificant	Higher (WS)
			Insignificant	Lower (WS)
	Smaller	Smaller		
			Larger	Larger (WS)
			Insignificant	Higher (WS)
	Lower	Lower		
			Higher	Higher (WS)
Lower				
	Insignificant	Lower		
			Insignificant	Have (WS)

Griffin also compared logit analysis with probit analysis. He concluded that

"logit is a preferred procedure because, unlike probit, the log-likelihood function is concave in the parameters. In probit analysis, problems of local vs. global optima arise. The search for a global optimum can sometimes require considerable computational effort."[10]

Nevertheless, Griffin chose discriminant analysis as the main method for his 1983 paper. He provided the following reason:

"Since the primary emphasis is on classification and prediction, multivariate discriminant analysis was selected as the dominant statistic procedure... classification error rates are essentially similar using either multivariate discriminant or multivariate logit analysis."[1]

The multivariate test used by Salatka is different. Salatka realized that previous studies obscured both the average and cross-sectional capital market effects of SFAS No. 8. Instead, he used both ordinary least-squares (OLS) and weighted least-squares (WLS) cross-sectional regression to explain the behavior of the excess returns of late adopters, early adopters, and control groups. In addition, he extended capital market testing methodology by exploring two adjustments for the size effect in January (i.e., the January effect) and by comparing WLS with OLS.

Variables and Evidence in Previous Studies

The independent variables used and the evidence found from the four papers are summarized in Table 1 and discussed in this section. In Table 1, the factors are arranged in the sequence used by Kelly[6] but the factors are left uncategorized.

Griffin[1]

Griffin examined and described managers' preference for the accounting choices inherent in SFAS No. 52. He used

(1) leverage (long-term debt/equity),

(2) beta coefficient,

(3) firm size (market value of common stock),

(4) return (market return and total assets return),

(5) potential impact of SFAS No. 52 (changes in foreign exchange adjustment), and

(6) nature of firm's response to SFAS No. 8,

as possible determinants of management's interest in foreign currency accounting rules. His study focused on management's decision to respond (lobby), rather than on the decision to support or oppose the standard. Thus, firms in his study were classified only as respondents or non-respondents — respondents being those firms that submitted comments on the FASB proposal resulting in SFAS No. 52.

The findings of the univariate analysis tests indicated that SFAS No. 52 respondents appeared to be larger and less profitable, and responded earlier to SFAS No. 8. Although Griffin indicated that the discriminant model exhibited a modest incremental ability to predict those firms likely to submit comments on SFAS No. 52, the results from the discriminant analysis are vague. He concluded that this might be because the model used in his study is economically and statistically incomplete in defining the constructs and providing error-free measurements of those constructs. This may be viewed as a valuable suggestion for further research in this area.

Kelly[2]

Kelly studied whether management's ownership in their companies and the firm's leverage explain the decision to lobby on the exposure draft for SFAS No. 8. Responses were refined by classifying all lobbyers based on the nature and focus of their comments on the exposure draft. Kelly used

(1) leverage (total debt/total assets),
(2) firm size (book value of total assets),
(3) foreign sales as a percentage of total consolidated sales, and
(4) management's ownership percentage

as hypothesized independent variables that influenced lobbying activities.

The results from univariate tests indicated that lobbyers opposed to SFAS No. 8 because of implementation difficulties were of a larger size and had a higher percentage of foreign sales. However, the leverage and management ownership variables were not statistically significant. On the other hand, lobbyers opposed because of the income effect were of a larger size, had a higher percentage of foreign sales and leverage, as well as a lower percentage of management ownership. Results from the logit analyses were unclear and were, as indicated by Kelly, affected by multicollinearity, particularly between size and foreign sales percentages. She then controlled for firm size by using a matched-pairs design with logit analyses, but the result for lobbyers concerned with implementation was still the same; no statistics were significant in both leverage and management ownership variables. However, for lobbyers concerned with income effect, management's ownership percentage was significantly lower than that of non-lobbyers.

Ayres[3]

Ayres examined the characteristics associated with management's choice of early adoption of SFAS No. 52. Her study investigated the following variables:

(1) proximity to debt and dividend constraints (ratio of interest coverage and ratio of dividends to unrestricted retained earnings),
(2) size (total assets),
(3) reported earnings (percentage change in pre-adoption earnings per share), and
(4) percentage of stock owned by directors and officers.

Ayres argued that the effect of adoption of SFAS No. 52 on net assets depends on the relation between historical and current exchange rates and a company's mix between monetary and non-monetary assets. She therefore considered the direction of the impact from adoption of SFAS No. 52 on the ratio of long-term debt to total assets to be ambiguous. Thus, she excluded the long-term debt to total assets ratio as a variable.

Ayres used "percentage of stock owned by directors and officers" as one independent variable, whereas Kelly used "management's ownership percentage." The direction of the impact from these two variables is, in fact, the same. First, firms with a lower "percentage of stock owned by directors and officers" are commonly more widely held and may be thought of as manager-controlled, or as a professional-manager type company, whereas, as the "percentage of stock owned by directors and officers" increases, the company becomes more owner-controlled, or an owner-manager type company. Second, firms with a lower "management's ownership percentage" may be thought of as professional-manager type, whereas, as the "management's ownership percentage" increases, the company becomes an owner-manager type.

The results from univariate tests of hypotheses showed that firms choosing to adopt SFAS No. 52 at the earliest possible adoption date

(1) were closer to debt and dividend constraints (had lower ratio of interest coverage and higher ratio of dividends to unrestricted retained earnings),
(2) were smaller, and
(3) had a smaller percentage of earnings increase from the previous year.

However, the percentage of stock owned by directors and officers was not statistically significant. The result from the multivariate analysis (logit model) indicated that all variables were significant and provided support for the hypotheses.

Salatka[4]

Salatka proposed and tested a positive theory of stock market reaction concerning stock price effects of SFAS No. 8. He posited that the capital market consequences of SFAS No. 8 included a decline in the price–earnings ratio of many multinational corporations. Therefore, Salatka hypothesized that both early and late adopters would exhibit greater stock price decline for the firms that

(1) were closer to debt covenant constraints [with a higher leverage ratio (book value of debt/market value of common stock), higher proxy of total risk, lower interest coverage ratio, higher dividend to unrestricted retained earnings ratio, and lower working capital ratio],
(2) were larger (higher total value of market value of common stock and book value of long-term debt),
(3) had larger income variability (higher percent change in the standard deviation of earnings per share),
(4) had larger amounts of foreign business activity (higher foreign sales to total sales ratio), and
(5) had a management compensation agreement.

He tested the hypotheses for both early and late adoption firms, because both groups of firms were affected and were expected to exhibit equity price changes.

The results from the Mann–Whitney test indicated that the early adopter group had significantly greater values of the variables for size and percent change in earnings than the late adopter group. The results from cross-sectional regressions for late adopters, which used independent variables as surrogates for contracting and political costs, provided weak support for the prediction. For the early adopter group, similar results were found. This suggested that both groups of firms incurred contractual constraints resulting from SFAS No. 8. However, Salatka argued that early adopters probably used production, investment, and/or financing decisions as the primary ways to avoid currency translation adjustments before SFAS No. 8. Therefore, it is possible that share price changes for early adopters did not result from the costs of contractual constraints directly, but from changes in production, investment, and/or financing choices in response to impending contractual and political constraints.

Several points suggested by Salatka might be valuable for further research in applying foreign currency exchange accounting alternatives to positive theory, although some of these points deal specifically with examining stock market reactions. These points relate to the study of

(1) the differences between early adopters and late adopters in production, investment, and financing activities, such as hedging, foreign investment strategy, and debt renegotiation,
(2) the January effect concurrent with the Exposure Draft of SFAS No. 8, and
(3) the effects of excess returns caused by changes in foreign currency exchange rates.

Summary

An important role of accounting theory is to explain why one firm uses one technique or method and others use different approaches. In the past decade, attention has been given to developing a positive theory of management's reactions or stock market price reactions to accounting rules, including foreign currency translation accounting. This paper presents a summary of the research approaches, independent variables, and different forms of evidence reported in four important foreign currency transaction accounting-related positive theory studies. As such, it presents a current statement of major research findings and theory development in this area.

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An Analysis of the Impact of Selected EEC Directives on Harmonizing Listing and Filing Requirements of EEC Stock Exchanges

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Key words: EEC Directives; Environmental factors affecting accounting and reporting requirements; Harmonization of EEC stock exchange; Listing and filing requirements

Abstract: *This paper examines the impact of three EEC Directives (Admission, Listing, and Interim Reporting) on the harmonization of listing and filing requirements of four EEC stock exchanges: the International (London), Amsterdam, Frankfurt, and Paris stock exchanges. The study reveals that the implementation of the three EEC Directives has helped narrow the differences in the listing and filing requirements of the four EEC stock exchanges. An analysis of the differential impact of the three EEC Directives on the listing and filing requirements of the four stock exchanges vis-à-vis two environmental factors, major providers of corporate capital and regulatory frameworks, underlines the importance of considering environmental factors existing in different countries in any initiative designed to harmonize accounting and reporting requirements.*

A number of international organizations, such as the International Accounting Standards Committee, the International Federation of Accountants, the UN Commission on Transnational Corporations, the Organization for Economic Cooperation and Development, and the European Economic Community (EEC), play a major role in the international harmonization of accounting standards. What distinguishes the EEC harmonization effort from that of the other international organizations is that the EEC Directives are binding on member states whereas pronouncements of other international bodies are recommendations. The legal force behind the EEC Directives makes them a major force in the drive to harmonize accounting standards among

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countries in the EEC. The impact of EEC Directives on harmonization of accounting standards has been widely discussed by such writers as Burnett (1975) and Nobes (1980a, 1980b, 1983a); however, most of the articles have been confined to a discussion of the Fourth and Seventh Directives that concern annual accounts and consolidations, respectively.

This paper examines the EEC initiative to harmonize listing and filing requirements of EEC stock exchanges. More specifically, the effect of the three directives on the listing and filing requirements for companies on the International (London), Amsterdam, Frankfurt, and Paris stock exchanges noted below is analyzed. The three directives are as follows:

(1) The Admission Directive, March 5, 1979, providing for minimum conditions for admission of securities on stock exchanges of member countries.
(2) The Listing Directive, March 17, 1980, concerning content, checking, and publication of a prospectus prior to its official quotation on stock exchange.
(3) The Interim Reporting Directive, February 15, 1982, concerning interim reporting.

The study focuses on these three directives because they were specifically promulgated to harmonize minimum listing and filing requirements of EEC stock exchanges. The attempt to harmonize stock market legislation represents one of the important approaches adopted by the EEC to unify its members' capital markets. A unified capital market is one of the fundamental objectives of the EEC as established by the Treaty of Rome. Thus, a study of EEC Directives on securities market legislation should provide insight into the development and prospects for an unified EEC capital market.

Additionally, a company's listing choices among different foreign stock exchanges are strongly influenced by the level of financial reporting and disclosure requirements at home and abroad. "Firms appear more likely to list where the disclosure requirements are similar to or less stringent than in their own domiciles."[1] Therefore, the harmonization of listing and filing requirements of EEC stock exchanges may have an impact on existing foreign listing patterns. Harmonized listing and filing requirements of EEC stock exchanges could induce EEC firms to list more frequently within the EEC capital market. Harmonization would also provide motivation for both EEC and non-EEC firms to be simultaneously listed on EEC stock exchanges without significant cost and time commitments.[2]

The four stock exchanges included in this study were selected because they have a significant number of listings, both domestic and foreign, and would presumably be most affected by EEC Directives pertaining to securities markets. Furthermore, the diversity in financial and tax reporting practices among the four countries (United Kingdom, the Netherlands, Germany, and France) in which the four stock exchanges are located, make these exchanges suitable candidates for studies on harmonization. International classification studies by Nair and Frank (1980), Nobes (1983b), and Alnajjar (1986) place the four countries in at least two different clusters. In addition, the four stock exchanges operate under substantially different regulatory frameworks: International (UK) and Amsterdam, self-regulated with an oversight body; Frankfurt, banking controlled; and France, government controlled.

The first section of this paper discusses the objectives and basic requirements of the three EEC Directives (Admission, Listing, and Interim Reporting). Section two of the paper discusses salient listing and filing requirements of four EEC stock exchanges (International, Amsterdam, Frankfurt, and Paris) with special reference to the impact of the above three EEC Directives. Some explanations for the differential impact of the three directives on the four stock exchanges are presented in section three. Some summary comments conclude this study.

EEC Directives Affecting Stock Market Legislation

In this section, the requirements of the three EEC Directives (Admission, Listing, and Interim Reporting) that were promulgated to harmonize the listing and filing requirements of the stock exchanges of member states are discussed.

Admission Directive

The main objective of the Admission Directive, adopted March 5, 1979, is to specify minimum conditions for admission of securities to official stock exchange listing in member states. The directive also stipulates the minimum filing requirements for listed firms on EEC stock markets. This requires firms listed on various stock markets to provide equivalent information to all stockholders, irrespective of domicile. The implementation of this directive should help remove obstacles to the interpenetration of securities markets that arise as a result of divergent admission conditions prescribed by different member states.

The Admission Directive establishes certain numerical standards of eligibility for the admission of securities to official listing designed to provide assurance as to the quality of the stock to be listed in terms of its liquidity, shareholder base, and negotiability. A company seeking listing must have published its annual accounts in accordance with its national law for the three financial years preceding the year in which application for official listing is submitted. This requirement can be waived by the authorities of member states if it appears to be in the best interests of the company and investors and if the authorities are satisfied that investors will have the necessary information to make an informed judgment of the company and the securities for which listing is sought.

Non-EEC firms are required to meet additional requirements for admission to listing on an EEC stock exchange. A firm from a non-EEC country may not be admitted to listing on an EEC stock exchange if its shares are not listed in its country of origin or in the country where the major proportion of its shares are traded. However, under the directive the authorities of member states reserve the right to make an exception in cases where they are satisfied that the absence of such a listing will not affect investors' protection.

As part of the filing requirements established by the Admission Directive, listed firms are required to meet the following reporting and disclosure requirements:[3]

(1) To publish and make available as soon as possible the firm's most recent audited annual report. If the company prepares both its own and consolidated annual

accounts, it must include both sets of accounts. The authorities of member states may make exceptions in certain cases, requiring only one set of accounts (its own or consolidated), if they deem that the accounts not made available do not contain any additional significant information.

(2) If annual accounts and reports do not comply with EEC directives or do not give a "true and fair view" of the company's financial position, more detailed and/or additional information must be provided.

(3) The company must also inform the public in a timely manner of any significant development or events likely to have a substantial impact on the stock price of the company.

The Admission Directive also addresses such issues as the treatment of stockholders and equivalence of information provided to the various stock markets in which a firm's securities are listed. Even though the thrust of the Admission Directive is to harmonize conditions for admission of securities to EEC stock exchanges and to provide minimum listing requirements for listed companies, it is not intended to serve as a single admission procedure since great flexibility is afforded each stock exchange in the implementation of the directive.

Listing Directive

The Listing Directive, adopted March 17, 1980, specifies the minimum listing particulars to be provided by firms applying for listing on an exchange in a member state. The main objective of the directive is to ensure that complete and comparable information is published by a company before its securities are admitted to listing on a stock exchange. This requirement should enable potential investors to make informed investment decisions as well as provide equivalent safeguards for both present and potential holders of securities.

Under the Listing Directive, the company seeking listing not only provides general information about the company, its line of business, capital structure, directors and officials, but it must also submit the following financial information:[4]

1. The last three audited balance sheets and profit and loss accounts (its own and/or consolidated) of the company, presented as a comparative table, must be filed with the competent authorities not later than 18 months after the end of the financial year to which the last annual statements published relate. The financial statements relating to the most current year must be accompanied by all footnotes.

2. Where more than nine months have elapsed since the date of the last annual financial statements, interim accounts for at least the first six months of the current financial year are required to be included in the listing particulars. If such financial accounts are unaudited, that fact must be stated.

3. The profit or loss per share resulting from the company's ordinary activities (after tax) for each of the last three financial years must be submitted.

4. A table reporting the sources and application of funds for the past three financial years must be included in the listing particulars.

5. When the listing particulars pertain to consolidated annual accounts, disclosures as to the method of consolidation must be made.

6. The company is also required to submit general information on the business trends of the company since the last financial statements were published. The company must also submit information on the company's prospects for at least the current financial year. An exception to this requirement can be granted by the competent authority of a member state.

As discussed earlier, the Listing Directive specifies minimum requirements to be met by companies seeking listing on a stock exchange of a member country. Equivalent listing and filing standards in member states are designed to provide comparable safeguards for investors across member countries and facilitate cross-border investment as well to enable companies to list simultaneously or in rapid succession on stock exchanges of member states, thus, strengthening the EEC's capital markets.

Interim Reporting Directive

The Interim Reporting Directive, adopted February 15, 1982, requires listed companies to provide the public, on a regular basis, half-yearly reports (consolidated or unconsolidated). The main objective of the directive is to protect investors by providing regular information of listed companies throughout the year. The half-yearly reports required under the directive must relate to the first six months of the financial year and be published within four months thereafter. In exceptional cases, the authorities of a member state can grant an extension to a listed company for the publication of the interim report.

The half-yearly reports should be divided into two parts: (1) the financial part, which presents financial information in a tabular form, and (2) a non-financial part, consisting of explanatory statements that are intended to help investors make comparisons with prior periods concerning the company's performance and financial position and to assess the future prospects of the company.[5] At a minimum, the financial information provided must reflect turnover (sales) and profit and loss before or after taxes. The half-yearly reports are not required to be audited; however, the reports must state whether they are audited or unaudited.

The three EEC Directives discussed in the preceding paragraphs provide the minimum requirements for the admission of securities to a stock exchange listing of a member state and the continued obligations of companies after admission. The directives clearly state that the requirements are minimum in nature and that member states are free to impose additional or more stringent requirements than those contained in the directives. In spite of the great flexibility afforded each member state in enforcing these directives, their implementation should lead to a significant harmonization in the listing and filing requirements of EEC stock exchanges.

Member states were required to incorporate all three directives into national legislation by June 30, 1983; however, most member states far exceeded the specified period in implementing the three directives. For example, the three directives were fully implemented in France and Germany only by 1987. In contrast, in the UK and the Netherlands the three directives were incorporated into national legislation a

little earlier. To an extent, the speed of implementation of the three directives reflected the amount of revision required in securities legislation in the respective countries to comply with the three directives.

Listing and Filing Requirements of Four EEC Stock Exchanges with Reference to the Impact of the Three EEC Directives

In this section, four major EEC stock exchanges (International (London), Amsterdam, Frankfurt, and Paris) are examined, with special reference to their regulatory framework and the effect of the three EEC Directives on their listing and filing requirements. Since the three directives collectively address listing and filing requirements of EEC stock exchanges, the analysis of each stock exchange is organized in two subsections: (1) listing requirements, and (2) filing requirements. In situations where an exchange has listing and filing requirements that exceed those of the three EEC Directives, such requirements are also highlighted. A comparison of the salient listing and filing requirements of the four stock exchanges before and after the implementation of the three directives is presented in Table 1.

International Stock Exchange (ISE)

In contrast to most European stock exchanges, the ISE, until recently, was a self-regulated market. There was minimum governmental interference in the operation of the stock exchange. The Council of Stock Exchange, the governing body of the ISE, prescribed and enforced its own regulations regarding registration, listing, and filing requirements for companies; however, since 1986, the Financial Services Act provides for a new private body, the Securities Investment Board (SIB), to oversee the activities of the Council of Stock Exchange. SIB is entrusted with both rule-making and rule-enforcing powers. Although it is too early to assess the effect of the new regulatory framework on the ISE, some concerns are being expressed that this new wave of regulatory activity in the UK, which comes at a time when other European stock exchanges are undertaking major deregulation initiatives, may undermine London's position as Europe's premier financial center.[6]

Listing Requirements

In general, the EEC Directives did not have a significant impact on the listing requirements of the ISE. The existing listing requirements of the exchange either met or exceeded the requirements specified by the three EEC Directives.

The Financial Services Act of 1986 (the Act), updated and consolidated the listing and filing requirements of the ISE. The Act also incorporated the three EEC Directives discussed earlier.

All companies, whether domestic or foreign, seeking to list on the ISE must file a prospectus with the Council of Stock Exchange. The prospectus must include information on the securities for which application is made: the capital structure of

Table 1. Salient Listing and Filing Requirements of the London, Amsterdam, Frankfurt, and Paris Stock Exchanges Affected by the EEC Directives – Admission, Listing, and Interim Reporting

	London Stock Exchange		Amsterdam Stock Exchange		Frankfurt Stock Exchange		Paris Stock Exchange	
Regulatory Framework	Before[a]	Present	Before[a]	Present	Before[a]	Present	Before[a]	Present
	Self-regulation	Self-regulation with oversight body	Self-regulation	Self-regulation with oversight body	Banking Controlled		Government Controlled	
EEC Directive Requirements								
Listing Particulars								
Financial information last 3 years (Balance sheets and income statements)	Last 5 years	Last 5 years (Foreign co.'s last 3 years)	Last 2 years	Last 3 years	Last 3 years	Last 3 years	Last 10 years (Director's Report, Shareholders' meetings report, last 5 years)	Last 3 years
Funds Statements last 3 years	Same as above	Same as above	Not Required	Last 3 years	Not Required	Last 3 years	Encouraged	Last 3 years
Consolidated Statements	Required	Required	Not Required	Required	Required	Required	Required	Required
Filing Requirements								
Annual Reports (Balance sheets and income statements)	Required	Required	Required	Required	Required	Required	Required	Required
Funds statement	Required	Required	Not Required	Required	Not Required	Required	Strongly Recommended	Required
Interim Reports (6 months)	Required	Required	Required	Required	Not Required	Required	Required (Quarterly information on Turnover)	Required
Consolidated Statements	Required	Required	Required	Required	Optional	Required	Not Required	Required
Foreign Companies								
Language that reports are to be published in	English	English	(Dutch, English, French, German)	(Dutch, English, French, German)	German (Interim reports may be published in foreign language)	German	French	French
Differences between accounting principles in country of origin and national accounting principles (when former used)	Disclose	Disclose (compliance with IAS)	No Disclosure	Additional information required	No Disclosure	Additional information required	Disclose	Additional information required

[a] Before incorporation of EEC Directives into national legislation.

the company; the company's activities; financial information concerning the company; the management of the company; and the recent development and prospects of the company.

In contrast to the Admission Directive requirement that a company seeking listing must have published its annual accounts for the three years preceding the year in which listing is sought (period of existence), the ISE requires a five-year minimum period of existence for a firm to qualify as an applicant for listing. Furthermore, firms seeking listing on the ISE must submit all financial information required in the Listing Directive for the last five years even though such information is only required for the last three years under the Listing Directive.

Effective November 1988, the ISE relaxed its accounting disclosure requirements for major foreign companies seeking listing on the exchange. Foreign companies are permitted to submit financial information for the three most recent years instead of for five years, provided they meet the following basic conditions:[7]

(1) Shares of the company have been listed on a recognized overseas exchange for at least two years.
(2) Company shares have a five-year trading record, and the shares in the public hands have a value of at least 150 million pounds.
(3) The company confirms that disclosure of accounting information for five years is not fundamental for an assessment of the securities being listed.

Filing Requirements

The requirements of the EEC Admission and Interim Reporting directives discussed earlier are reflected in the ISE filing requirements. In the case where a domestic company departs significantly from applicable standard accounting practice, a statement by the directors of the reasons for such departure must be included in the annual report. An explanation must also be furnished if there is a significant variance between the results shown by the accounts and the published forecasts made by the company for the period to which the accounts relate.

The ISE does not require foreign companies to comply with UK accounting principles; however, it encourages listed foreign companies to comply with international accounting standards issued by the International Accounting Standards Committee. If the accounts of a foreign company are not in conformity with international accounting standards, all significant departures or non-compliance with such standards must be disclosed and explained.[8] All documents filed by foreign companies must be in English or be accompanied by a certified translation.

The ISE also requires extensive disclosure concerning activities of the directors of a company, their shareholdings in the company, and their salaries. The exchange has established a "Model Code for Directors," which is a set of guidelines for minimum standards of good practice expected of directors.

The effect of the three EEC Directives on listing and filing requirements of the ISE has been limited at best. In many cases, the requirements of the ISE exceed the requirements established by the three EEC directives. In fact, to a certain extent, the extensive reporting and disclosure requirements of the ISE have served as a model in

shaping the requirements of the three EEC Directives, as well as the requirements of other stock exchanges in Europe.

Amsterdam Stock Exchange (ASE)

The ASE, for the most part, is a self-regulated exchange. That is, the Vereeniging voor de Effectenhandel (Association for Trading in Securities), which is composed of representatives of banks and brokerage houses, makes its own rules and governs the ASE. The Vereeniging recommends to the Minister of Finance the companies which should be admitted to stock listing on the ASE. The role of the Minister of Finance has been limited to the formal authorization of the recommendations of the Vereeniging. The Dutch government is currently engaged in establishing a new oversight body to oversee the securities markets. The exact role of this new body is not yet clearly defined. It is envisioned to be an independent supervisory body appointed by the Minister of Finance and primarily involved in the admission of securities to listing. Under the new arrangement, it appears that the self-regulating element will remain with the Vereeniging.[9]

Listing Requirements

The accounting disclosure requirements in the Netherlands have always been high relative to those required by other countries in Continental Europe. All companies seeking listing on the ASE must publish and file a prospectus. Prior to the incorporation of the EEC Directives into securities legislation, the ASE required that companies seeking listing include in their prospectus audited balance sheets and income statements only for the last two financial years as part of the listing particulars. This requirement has since been amended to conform to the EEC Listing Directive requiring the financial statements of the last three financial years.

All domestic firms with subsidiaries are required to submit consolidated financial statements with supplementary information on non-consolidated participative interests. Companies seeking listing are also required to file analyses of turnover by segment, geographical areas, and number of employees.

Filing Requirements

Prior to the incorporation of the EEC Directives, companies listed on the ASE were not required to file a funds statement, although, voluntary disclosure of changes in assets and liabilities was common. With the incorporation of the EEC Directives, the funds statement has become mandatory.

Non-EEC companies may have to supply more detailed and supplementary information if, in the opinion of the Stock Exchange officials, the annual accounts of the company in question are not equivalent to annual accounts prepared in accordance with Dutch legislation. Such additional disclosure was not required before the incorporation of the EEC Directives by the ASE. Publication of accounts by foreign companies can be either in Dutch, English, French, or German.

Prior to the incorporation of the EEC Directives, the ASE, unlike the ISE, did not have the same level of disclosure regarding directors' salaries, ownership in the

company, and options given to directors and officers. The rules have been modified to include such information.

The ASE has sought to uphold high standards of listing and filing requirements. Its well-developed equity market and its smooth and non-obtrusive regulatory framework make it an attractive market for companies seeking listing.

Frankfurt Stock Exchange (FSE)

Supervision of stock exchanges in Germany falls under the jurisdiction of the relevant state government. Banks play an important role in the German equity market. Banks are responsible for a large proportion of the trading volume and new security issues on the FSE. Banks also have a significant presence on the three most powerful governing bodies of the FSE, the Stock Exchange Board, the Admissions Office, and the Chamber of Official Brokers.

The three EEC Directives under study were incorporated into German legislation with the passage of a series of laws between 1986–88. The delay was partly due to the major revisions required to bring laws governing the regulation of stock exchanges in Germany into compliance with the three EEC Directives.

Listing Requirements

To have their securities listed, companies must submit a prospectus to the Admissions Office of the FSE. Prior to enactment of the Stock Exchange Act of 1987 which incorporated the three EEC Directives, the Admissions Office followed informal procedures, partly reflected in a confidential manual used by banks. At best, the Admissions Office conducted a very cursory examination of the contents of the prospectus; it was not the responsibility of the Admissions Office to investigate the reliability of the company seeking listing. Since the enactment of the Stock Exchange Act, the admission process is regulated by the rules prescribed by the "Order on Admission to the Stock Exchange" (1987) which has greatly tightened the process.

Under the new regulations, the prospectus must contain financial statements including funds statements for three years. Information of net income and dividends per share for the last three years must also be furnished. Funds statements and information on net income and dividends per share were not required as part of the prospectus before the incorporation of EEC Directives.

Filing Requirements

The Interim Reporting Directive has greatly impacted the filing requirements of the FSE. Prior to the Stock Exchange Act, interim disclosure was not compulsory by law; however, many listed companies published interim figures even though no specific form of publication was practiced. A letter to shareholders was considered sufficient although a press release or mention in a newspaper was sometimes deemed necessary.[10]

The Stock Exchange Act makes interim reporting disclosure compulsory and prescribes the form and content of the interim report in consonance with the requirements of the Interim Reporting Directive. Some latitude is provided for German companies listed only on domestic stock exchanges in that they may be

permitted by the Admissions Office to state net income as an estimated amount in the interim report. Companies seeking this exception have to demonstrate that unreasonably high costs can be avoided by this alternative form of reporting. Non-EEC companies may be permitted by the Admissions Office to publish interim reports in another language (other than German) that is common in the field of investments in foreign securities.

Listed companies are also required to file audited annual reports. However, the Admissions Office may allow summarized or abbreviated annual financial statements if it is felt that the loss of information is not significant and the place where complete financial statements can be obtained is explicitly stated.[11]

Before the current regulations, foreign listed companies had the option to file either consolidated or unconsolidated accounts. Under the new regulations, a listed foreign company that prepares both unconsolidated and consolidated financial statements must make both types of annual financial statements available to the public. The Admissions Office can grant permission to a company to file only one type of statement if it is felt that the omitted statements do not contain any significant additional information. This is in consonance with the Admission and Listing directives.

Prior to the incorporation of the three EEC Directives, the listing and filing requirements of the FSE were more liberal, and the exchange was more loosely controlled than were the International and Amsterdam stock exchanges. However, the implementation of the three EEC Directives through the Stock Exchange Act of 1987 has greatly improved the listing and filing requirements of the FSE and thus brought them in general parity with those of the International and Amsterdam stock exchanges.

Paris Stock Exchange (PSE)

The PSE is closely regulated by the French government. The Commission des Operations de Bourse (COB) is the chief regulatory body of the PSE. The Minister of Finance oversees the activities of the COB and appoints the members of the COB. Although, the Minister of Finance approves all the regulations of the COB, the Minister generally does not interfere in the functioning and policies of the COB. Additionally, the Chambre Syndicale, the governing body of the brokers' association in France, acts in an advisory capacity to the COB.

Listing Requirements

The admission process to the PSE is closely supervised by COB. All companies seeking listing on the PSE are required to file a prospectus with COB. COB and the Chambre Syndicale closely examine the prospectus and financial statements of the companies seeking listing. Until recently, COB even followed the practice of having the financial statements of companies seeking listing, especially French companies, reexamined by an outside auditor. This practice is now rarely followed as accounting reporting and disclosure practices have become more standardized and sophisticated in France.

In addition to requiring that companies seeking listing submit balance sheets, income statements, and funds statements for the last three years, the PSE requires that such companies submit summarized financial data for the last five years on investments, distribution of earnings, yields on securities, and other items.[12] This requirement is a substantial liberalization of an earlier rule that required companies seeking listing to submit financial accounts for the last 10 years and information of directors' reports and shareholders' meetings for the last five years.

Even though financial accounts of companies in France were not required to be consolidated by law, COB, since 1971, had required consolidated statements from parent companies applying for listing on the PSE. However, listed companies were not required to provide consolidated accounts in the years subsequent to admission to the PSE. Effective January 1, 1986, consolidated financial statements became mandatory for all quoted or public companies.[13] Consolidation is one area where the stock exchange requirements have influenced public reporting in France.

Listing requirements of the PSE for foreign companies are more strict than those of the International, Amsterdam, and Frankfurt stock exchanges. With the incorporation of the three EEC Directives into national legislation, the PSE regulations make a distinction between companies from EEC countries and those from non-EEC countries. For example, foreign companies seeking to list on the PSE are required to be listed on a stock exchange in their country of origin; companies from EEC countries are exempt from this requirement. Similarly, companies from non-EEC countries must receive the authorization of the Minister of Finance to be listed on the PSE; however, authorization from the Minister of Finance is not required by companies from the EEC countries.[14]

Filing Requirements

With the growing interest in equity financing, the need to ensure complete and timely disclosures by listed firms has become a top priority of COB. All significant information, financial or otherwise, is required to be reported promptly to COB. In its effort to improve the quality and timeliness of disclosures, COB even published a list of companies with the best and worst records on disclosure.[15]

Interim disclosure information required by the PSE consists of semiannual balance sheets and quarterly turnover figures in terms of the company's main activity segments where necessary. This requirement is more extensive than what is required by the EEC Interim Reporting Directive.

In France, the publication of a funds statement became mandatory in 1986 and has been incorporated into the filing requirements of the PSE. Prior to this date, a funds statement was not required but its filing was strongly recommended.

All financial statements filed by listed companies must be audited by an independent auditor. Interim reports are not required to be audited; however, the reports should state whether they are audited or unaudited. Independent auditors that audit listed companies come under the scrutiny of COB. COB can object to the appointment of a particular auditor by a listed company and it can also criticize their auditing.[16]

Since its inception in 1968, COB has played a vigorous role in standardizing and raising the level of listing and filing requirements of the PSE. New measures adopted

by the French government to modernize and deregulate the French financial markets have increased the attractiveness of the PSE as a source of equity financing.

An Explanation for the Differential Impact of the Three EEC Directives on the Four Stock Exchanges

The previous discussion indicates that the implementation of the three EEC Directives has narrowed the differences in the listing and filing requirements of the International (ISE), Amsterdam (ASE), Frankfurt (FSE), and Paris (PSE) stock exchanges. Also evident is the differential impact of the three directives on the listing and filing requirements of the four stock exchanges.

The differential impact of the three EEC Directives is partly a reflection of the variation in disclosures required of listed companies on the four stock exchanges. It is generally agreed that disclosure levels in different countries are influenced by a number of factors such as legal systems, providers of corporate financing, status of accounting profession, and cultural factors; however, the two factors that the authors feel are more pertinent in explaining differences in disclosure requirements of stock exchanges are the major providers of corporate financing in a country and, to a lesser extent, the regulatory framework of capital markets.[17]

The relative importance of outside parties (stockholders, creditors, government) as providers of capital differs from country to country. In Germany, banks play a major role in providing capital to the corporate sector. In fact, it is a common practice in Germany to find representatives of banks on the Board of Directors of large public companies. In France, the government has a controlling interest in many large corporations and often is a major provider of capital to such corporations. In the UK and the Netherlands, equity capital constitutes an important source of financing for corporations which is reflected in the widespread ownership of stocks in these countries.

The major distinction between stockholders and other providers of capital (banks and government) is that most stockholders are outsiders.[18] Individual stockholders usually have little bargaining power and, therefore, very little access to private (internal) information of the corporation. As a result, they have to rely largely on published reports and they demand greater public disclosure and reporting by corporations. In contrast, other providers of capital (banks and government) generally wield more bargaining power to obtain timely and detailed information directly from the corporations. They do not need to rely on published reports to the same extent as stockholders. Thus, in countries where stockholders are relatively important as providers of corporate capital (UK and the Netherlands), one expects to find a greater demand for public disclosure and higher levels of accounting disclosure and reporting requirements. For purposes of our analysis, this implies that the three EEC Directives should have had less impact on the disclosure requirements of EEC stock exchanges based in countries where stockholders are an important source of corporate financing (International and Amsterdam) than on the disclosure requirements of EEC stock exchanges that are based in countries where other providers of capital are more important (Frankfurt and Paris).

The above assessment, is to an extent, consistent with the experience of the four stock exchanges in implementing the three EEC Directives. The implementation of the three EEC Directives did not require any major revision of existing listing and filing requirements of the ISE, reflecting the high disclosure requirements of the ISE prior to the implementation of the three EEC Directives.

Contrary to what one would have expected given the shareholder orientation in the Netherlands, the implementation of the three EEC Directives had a significant impact on the listing and filing requirements of the ASE; however, the impact has been more on paper than on actual practice. A possible explanation is that a number of the disclosure requirements, such as the requirement for filing of the funds statement that became required with the implementation of the three EEC Directives, were already being followed in practice by companies listed on the ASE. In the Netherlands, a few large multinationals, such as Royal Dutch, Philips, and Unilever, exert considerable influence on accounting and reporting practices in the country. In 1988, the above three multinationals accounted for 30% of the total trading volume on the ASE. An international survey of annual reports, reveals that Dutch multinationals had high levels of voluntary accounting disclosure with the annual report of Philips being rated second overall in terms of quality of disclosure.[19] The high quality of disclosures of the Dutch multinationals has served as a standard for other Dutch companies even in the absence of formal legal requirements. Thus, the implementation of the three EEC Directives merely formalized disclosure requirements which were already being followed in practice. Furthermore, the relatively quick implementation of the EEC Directives by the ASE also lends support to this argument.

The strong impact of the three EEC Directives on the disclosure requirements of the FSE is partly a reflection of the lower disclosure levels required by the exchange prior to the implementation of the EEC Directives. The relatively lower disclosure levels of the FSE can be partly attributed to the credit orientation in Germany and the relatively insignificant role of individual stockholders in corporate financing. The long delay in implementing the three EEC Directives by the FSE is also indicative of the major revision required in securities legisation to comply with the three directives.

The impact of the implementation of the three EEC Directives on the listing and filing requirements of the PSE does not lend itself to direct explanation. Given that the government and banks are important providers of corporate finance relative to individual stockholders in France, one would have expected that existing disclosure requirements of the PSE would have been relatively low before the implementation of the three EEC Directives; however, the effect of the three EEC Directives on the disclosure requirements of the PSE appears to have been no more significant, or even less significant, than the effect of the directives on the disclosure requirements of the ASE.

The relatively high disclosure requirements of the PSE (even prior to the incorporation of the EEC Directives) can be partly attributed to the regulatory framework of the PSE. The COB, the chief regulatory body of the PSE since its formation in 1968, has followed a vigorous policy to raise the level of disclosure and standardization of the listing and filing requirements of the PSE. In fact, in many areas of accounting, stock exchange requirements have influenced public reporting in France. For example, the COB since 1971 has required companies seeking to list

on the PSE to provide consolidated accounts even though consolidated accounts were not required by law until 1986. Nobes, summarized the contribution of regulatory bodies, such as the COB in raising disclosure requirements as follows:[20]

"... these stock exchange bodies are taking the part otherwise played by private and institutional shareholders who have, over a much longer period, helped to shape Anglo-American accounting systems."

Summary

This paper analyzed the impact of three directives (Admission, Listing, and Interim Reporting) on the listing and filing requirements of four EEC stock exchanges i.e., the International, Amsterdam, Frankfurt, and Paris stock exchanges. The analysis reveals that the implementation of the three EEC Directives has narrowed the differences in the listing and filing requirements of the four EEC stock exchanges. More importantly, the differential impact of the three EEC Directives on the listing and filing requirements of the four stock exchanges underlines the importance of considering the environmental factors (e.g., providers of capital and regulatory frameworks) existing in different countries in any initiative to harmonize accounting and reporting requirements.

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Book Reviews

The Reporting of Profits and the Concept of Realisation *by Sir Bryan Carsberg and Christopher Noke, Institute of Chartered Accountants in England and Wales, London, 1989, 71pp.*

Statutory provisions in the early 1980s introduced the term "realized profits" into British company legislation. A change in the UK Companies Act restricted profits available for distribution to realized profits less realized losses. The Act did not define, however, what constitutes realized profits. In a subsequent document, the UK Department of Trade declared that it would be left to the companies' directors and ultimately to the courts to decide, according to current accounting practice, the profits that may reasonably be considered as realized. These statutory provisions presented members of the British accounting profession with two major problems: first, to define the meaning of realized profits and to develop practical methods of measurement, and, second, to determine how (if at all) to report unrealized gains and losses. These two questions apparently are best dealt with jointly because the definition the term "realized " affects the issue of reporting unrealized items.

The Carsberg and Noke (CN) report was commissioned by the Research Board of the Institute of Chartered Accountants in England and Wales at the request of the Accounting Standards Committee to discuss these two problems and to help the Committee determine whether it should prepare some guidance on these issues, and if so, what that guidance should be.

CN thoroughly review existing authoritative and academic literature related to the profit realization concept. They skillfully survey and analyze the literature, particularly in the United Kingdom and the United States, as well as the UK company law, the EEC Directives, and some current accounting practices. After identifying alternative possible meanings of profit realization, CN reach the conclusion that the current practice does not clearly define realization. No general conceptual framework exists as a guideline for various cases dealing with profit realization. Currently, there is no consistent treatment of the concept; rather there exist several different definitions of profit realization, each related to different specific cases. Not only do the existing definitions fail to cover the whole spectrum of cases which need a clear definition of realization, but there are also inconsistencies among the existing definitions. I shall discuss CN's arguments and illustrate some of the main points by referring to the existing literature. I shall then present CN's recommendations and my comments.

Authoritative and General Literature on Profit Realization

CN assert that accounting principles in the United Kingdom have not specifically been directed towards the determination of realized profits. The principles have been directed generally towards determining a true and fair view or, more narrowly, towards deciding when events should be recognized in accounting rather than when profit should be deemed to be realized.

Statement of Standards Accounting Practice (SSAP) No. 2 is an authoritative source of the United Kingdom's generally accepted accounting principles. It defined prudence, a fundamental principle deemed to govern all accounting practices, partly in terms of limited recognized profits to realized profits. Its definition of realized profits, however, is unclear and sometimed inconsistent with other practices.

In discussing the profit realization concept, the United Kingdom's CCAB Technical Release 481 refers to the parallel fundamental accounting concepts of prudence and accruals which are discussed in SSAP 2. As a workable definition of realized profit, however, the prudence concept has a number of shortcomings. First, its emphasis on cash and ultimate cash realization does not appear to be consistent with certain practices which, intuitively or by tradition, accountants might consider to be realized profits. For example, consider an exchange of investments or other assets for shares, or barter transactions, such as an exchange of stocks for a fixed asset and other similar transactions which are not involved directly with cash. International Accounting Standard (IAS) on Revenue Recognition specifically requires the recognition of revenue in an exchange of dissimilar assets, even though this is not in accord with the SSAP 2 definition of prudence. A second problem is that the definition of prudence uses "realization" in a number of different senses: the cash realization of other assets; the realization of profit in the form of cash; and the realization of profit in the form of other assets which will then be realized in cash. CN perceive a great difficulty with the last case. They argue that the statement concerning realization of profit in the form of other assets does not say "by the receipt of other assets," which would imply an exchange transaction. Its meaning, therefore, hinges on the word "realized," and as this pivotal term in undefined, the prudence concept does not provide a workable rule for the ascertainment of realized profits; it is a tautology. As Edey[1] noted, "like the accrual concept, the prudence concept, has to be interpreted in the light of existing conventions. It is not a postulate from which the correct treatment of an item can be inferred by a logical process, it is rather a reminder of the existence of those conventions." Unfortunately, the conventions relating to realization have never been precisely formulated.

An examination of some UK law cases reveals, again, that there are several different interpretations of the realization concept. For example, in one case,[2] the court stressed that the Companies Act restricts dividends distributions to realized profits. Yet, at the same time, another prominent author, Vatter[3] expressed a different opinion. He argued that the distributability test for income recognition is an unfeasible one and that accounting should not apply standards of financial administration to the reporting of financial events. In another court case,[4] Millett viewed realization as depending on the legal right to receive payment. In another (Scottish) case,[5] the court clearly deviated from the conversion into cash test, by requiring that all income and

charge relating to the relevant financial year should be taken into account, regardless of the receipt (or payment) date.

Similar to the 1981 Act (which provided that only realized profits may go to the profit and loss account), the EEC's Fourth Directive, on which the Act was based, used the phrase "profits made at the balance sheet date." According to the Directive, transfers from a revaluation reserve to the profit and loss account are restricted to amounts that have been entered as charges in the profit and loss account or that reflect increases in value which have been actually realized. Again, the Directive itself offers no guidance as to what constitutes either realized profits or profits made.

CN also note that the US literature refers to a variety of practices which are sometimes inconsistent, and that there has been no significant effort to end that nonuniformity. Several committees of the American Accounting Association have considered the realization concept; their recommendations have generated numerous articles in response. Generally, the discussions have centered on three issues relevant to realization: (1) the need for the receipt of an asset of a particular type; (2) the need for the existence of a market transaction to which the entity is a party; and (3) the extent of services rendered by the entity. Some of the committee's findings have been general: "the essential meaning of realization is that a change in an asset or liability has become sufficiently definite and objective to warrant recognition in the accounts," some others have been more specific: "revenue realization is dependent upon the measurability of an asset acquired in exchange, participation in a market transaction, and the occurrence of the crucial event in the revenue earning process." Similarly, academicians have advanced equally diverse viewpoints; however, they agreed widely with the importance of objective measurement in the context of realization.

The themes identified in CN's literature survey provide ideas for further analysis although the themes do not point to any clear direction or conclusion *per se*. CN identify the following propositions for further consideration:

(1) Realization involves conversion into cash.
(2) Realization involves conversion into one of various kinds of assets, having defined characteristics.
(3) Realization involves an exchange transaction.
(4) Realization involves completion of an earning process or occurrence of a critical event.
(5) Realization involves the availability of assets that can be distributed.
(6) Realization involves the reduction of uncertainty about ultimate proceeds or the establishment of the amount currently realizable with reasonable certainty.

Carsberg and Noke's Conclusions and Recommendations

No existing general definition for profit realization has been identified by CN's carefully detailed study of the current practices. The willingness of accountants to

recognize a profit after a barter transaction, without limiting the transaction to a particular type of asset, suggests that conversion into a specified type of asset, chosen for its nearness to cash, is not a general criterion. Moreover, an exchange transaction seems not to be a prerequisite, given the treatment of interest receivable and discounts on certain securities. Completion of the work obligation under a contract is necessary before profit can be said to be realized under the contract. This requirement, however, can be applied to parts of the contract under the percentage of completion method for recognizing profit. Moreover, this requirement cannot serve as a general condition for realization because it does not cover all types of transactions and events, such as profiting from holding a security.

As CN could not identify a generally accepted clear meaning of realization, their first recommendation is that the Accounting Standards Committee should prepare a statement defining realization. They expect it to be a revision of the prudence definition of SSAP 2. CN suggest that a general definition of realization should be given in terms of measurement reliability. Using this general definition as a framework would allow individual standards to be determined, so the Committee could judge various specific cases in a consistent manner. In this way, the Committee would avoid the difficulty of having individuals apply their own judgments in controversial areas that might lead to inconsistencies.

In the third recommendation, CN urge the Accounting Standards Committee to think of a way of incorporating the realized profits concept into an overall measure of a firm's performance in the financial reporting. For example, CN promote the idea of a dual system for presenting information: one presentation would be related to a strictly defined concept of realized profits, limited to legally distributable profits, and the other would be related to the overall financial performance of a firm. Such a statement of total gains would reflect overall financial performance by combining all profits and gains. CN advocate applying a higher standard of reliability in determining whether an item can be included in distributable profit than in the statement of overall financial performance. CN additionally propose to review the presentation method of profit and loss items. For example, if the definition of realized profit leads to the recognition of holding gains on certain securities as realized, those gains should be (in most cases) excluded from operating profits.

CN's final recommendation calls for a decision on whether financial capital maintenance or physical capital maintenance concept should be used as the basis for profit measurement. If the financial capital maintenance concept is selected, the profit is measured while preserving the purchasing power of the firm's assets. If the second concept is selected, the profit is measured as the balance after preserving the enterprise's physical capacity to maintain previous levels of output. This action would clarify certain questions about whether or not an item should appear in the profit and loss account — definitions of realization and capital maintenance are jointly needed to determine the computation of profit. Decisions on those questions would clarify the accounting profession's position regarding the treatment of a surplus from the revaluation of fixed assets. CN believe that separate reporting of the surplus with respect to both capital maintenance concepts would be ideal.

Final Comments

This report has made a considerable contribution to the accounting field. Carsberg and Noke are likely to have an important impact on the Accounting Standards Committee, at whose request the report was commissioned. At the same time, however, CN have made a considerable contribution to the wider readership of scholarly accounting publications in the United Kingdom, the United States, and in other countries. CN have surveyed and analyzed the relevant academic, legal and professional literature. They have identified the critical problems related to the profit realization issue, which is a central concern in financial accounting. This issue has been a source of heated debates for many decades, and I am in complete agreement with CN as to how to approach the problem. There is not much point in trying to define realization to each specific case separately. It would allow much more flexibility and consistency first to define it generally as a conceptual framework. Subsequently, the principles of this general definition can be applied for various specific individual cases. I appreciate CN's concern for the reliability of measurement. Such strict measures can be practically applied if their other idea about dual presentation is adopted, one presentation being related to a strictly defined concept of realized profits and the other to the overall financial performance of a firm.

I highly recommend this report not only to those who are interested in accounting theory, but also to anyone who is dealing with financial reporting so that he or she can better appreciate and comprehend the profit realization measurement problems. In particular, this report could be used as excellent supplemental reading material for graduate students and academic researchers.

As an extension to this important work, it might be very interesting to study profit realization concepts from additional countries with different accounting systems, comparing similarities and dissimilarities, together with an analysis of the differences across the countries and their implications. Such a challenging endeavor could further enhance our understanding of international accounting theory and practice.

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4. The case of Potton Ltd.... Yorkclose Ltd is described in *The Times*, April 4, 1989.
5. The Scottish case of City of Glasgow Bank v Mackinnon (19 SC. Law Rep. 316).

Judgment in International Accounting: A Theory of Cognition, Cultures, Language and Contracts *by Ahmed Belkaoui, Quorum Books, Greenwood Press, New York, 1990, 130 pp, US$54.00.*

Once upon a time accounting professors were bold enough to tackle any kind of accounting problem; that was before the age of the Ph.D. program and the resultant narrowing of accounting specializations. Ahmed Belkaoui is a young scholar in an old tradition, who attempts to shed light on financial and managerial accounting theories, on international accounting, and even concerns himself with questions of deontology. What is more, his writings reveal that he has read and understood everything. One may disagree with him, but never deny him.

In this short book he attempts to bring his vast knowledge to bear on the construction of a theory of international accounting. He explores how "individuals from any culture form judgments and make decisions when faced with auditing, accounting, disclosure, or other relevant phenomena." Relevant, that is, to the practice of public accounting. To do this, he draws on the literatures of cognitive psychology, cross-cultural studies, linguistics, organizational behavior, and contemporary accounting research. The outcome is, I suggest, his model for international accounting research, summarized in these concluding words: "...cognitive processes guide the judgment/decision process in accounting and auditing and... the schemata underlying this process are in turn shaped by the crucial factors of culture, language, organizational culture, and contractual agreements" (p. 124).

Chapter 1 examines the literature on cognition, based on Bartlett's (1932) concept of schemata, which I visualize as knobs in the brain on which to hang ideas. This concept has had a great effect on educationalists, thanks to the work of Abercrombie, and has in recent years inspired some studies of auditor judgment, cited here. However, its implications for accounting are even more substantial. I had a graduate student from Nigeria with an undergraduate honors degree in French literature who was having great difficulty in grasping fundamental accounting ideas. I challenged him on this incongruity, and he confessed that these ideas were incomprehensible to him, citing the fact that the village where he grew up did not even have a post office. I wonder how much of the current emphasis on cash flow accounting is attributable to the fact that its advocates have no experience beyond financial and real estate investments.

Chapter 2 surveys the literature on culture and cross-cultural management research. (It is a surprise to find no mention of David Granick or Mason Haire, suggesting that ideology has been preferred to empiricism.) There are references to the accounting literature, notably by Belkaoui himself, Hofstede, Gray, Jaggi, and Nobes. The conclusion is that culture "dictates" the accounting environment and accounting and auditing judgments.

Chapter 3 deals with linguistics, but without referring to the work of Chomsky. Belkaoui accepts that accounting is a language, even though it is bookkeeping that was historically so described. Thus, the main accounting reference is to Ijiri. The point made by the author is that "the characteristics of accounting language are the symbolic accounting representation and the manipulation rules and the data of

cognitive behavior refer to a linguistic or nonlinguistic behavior of users of accounting data" (p. 75). The idea is extended into the realm of social observations, and it is asserted that social roles lead to different communication codes, called "linguistic relativity in accounting." It would perhaps have been useful to have included the literature on semiotics in this chapter, especially as Umberto Eco would be accessible to the author in the original Italian.

Chapter 4 attempts to transfer these ideas from individuals to organizations. Accounting references include Belkaoui himself, Boland, and Gambling. The discussion is short, and basically asserts the existence of an "organizational culture" distinct from the cultures of the organized individuals. The conclusion, that "organizational culture ultimately determines the judgment/decision process in accounting" (p. 99) follows from this assumption.

Chapter 5 assimilates agency theory into the model and most of the references in this chapter are to the accounting and finance literature, notably the ubiquitous Watts and Zimmerman and the *Journal of Accounting and Economics*. The conclusion is that "contracts define permissible behavior and actions that define the judgment/decision process in accounting" (p. 114).

As a consequence of the propositions, Belkaoui produces a diagram of "An International Accounting Theory" (p. 120) as a set of Chinese boxes, the outer box called cognitive relativism, and the inner box called "Judgment/Decision in Accounting." Thus, there is an implied assumption of a process from the former to the latter, by way of culture, linguistics, organizational culture, and finally contracts. Although it is obviously attractive to start with the concept of schemata, there is nothing known to physiologists or psychologists that explains how the words I am writing are somehow perceived by you, the reader, and rendered meaningful. Thus, Belkoui's model must be considered to fail at the first transition.

We next consider the role of culture, said to "dictate" accounting and auditing judgment. Again, it is tempting to ascribe national differences to their cultures, but accountants must face inconvenient facts. Twice in the last hundred years the Japanese have abandoned their accounting and auditing traditions and embraced those emanating from an alien culture. The 1980 and 1981 UK Companies Acts adopted accounting rules that were essentially German in origin. And even in the U.S.A. it has been asserted by the late Manuel Cohen that SEC accounting regulation was based on the UK Companies Acts because the US culture did not recognize corporate accountability.

That bookkeeping constitutes the language of commerce does not turn accounting and auditing into languages, so that the appeal to linguistics fails. There are, of course, linguistic problems in international accounting, but these are of a fairly trivial kind, even when they involve the Cyrillic script, and do not seem to deter international accounting and auditing practitioners. And I have already drawn attention to the nature of the difficulty we encounter when we attempt to clothe organizations with attributes observed in individual persons.

The missing subject in this study is the legal system. Perhaps 90 percent of accounting and auditing judgments can be traced directly to statute and case laws, and even in the U.S.A. where state legal systems remain mired in an eighteenth-century mold, the form and content of financial statements and the scope of the audit

and the audit report can be mapped into federal regulations of the Securities and Exchange Commission, notably Regulation S-X. However, Belkaoui has written an interesting book, which deserves to be read because of the author's breadth of knowledge and compendious viewpoint. It is doubtful, however, whether he has brought us any nearer to an international accounting theory.

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Managerial Accounting and Analysis in Multinational Enterprises

edited by H.P. Holzer and H.M. Schoenfeld. *Walter de Gruyter, Berlin, 1986, 270 pp, ISBN 0–89925–0847–4.*

This monograph offers a discussion of relevant accounting and reporting features found in multinational corporations when performance evaluation and management control are utilized. The material, presented in twelve chapters, includes a collection of seven case studies of multinational corporations drawn from the experience of management accountants and the research of scholars who have studied the companies' internal reporting systems. In addition, issues and recent developments in the monitoring of foreign operations, as viewed by the representatives of three international accounting firms, are presented in three chapters.

The discussion of the control and evaluation systems of the companies surveyed (four U.S., two European, and one South-Korean) describes their current practices. All the firms studied have been engaged in foreign operations and their systems are reviewed from the point of view of corporate headquarters. Differences in management philosophies among the firms, which translate into varied emphasis placed on control and measurement techniques, make the studies interesting. Still, a common thread of the various systems is their heavy reliance on traditional budgeting and control techniques which highlight financial ratios and plan versus actual comparisons to evaluate performance. Within this framework, firms also attempt to isolate the effect of exchange rate fluctuations when assessing performance. The established control and evaluation systems are said to be applied in practice to both domestic and foreign units.

H. Peter Holzer, one of the editors, starts the work with an introductory chapter reviewing the accounting literature on performance evaluation of international subsidiaries developed since 1965. There has been a transition from simple evaluation techniques to more sophisticated ones that attempt to segregate controllable and non-controllable items and the impact of exchange rate fluctuations. The recent literature has addressed the evaluation of the business unit as different from the evaluation of the unit manager. The chapter closes with a series of guidelines useful in the design and implementation of a performance evaluation system for international subsidiaries.

Each of the four U.S. companies analyzed portrays individual characteristics that shape its approach to management accounting. Perhaps the more traditional model is

that described for IBM where two subsidiaries oversee operations in respective global regions outside the U.S.A. Within each region the basic unit of control becomes the foreign country subsidiary which reports to the regional headquarters closely following the corporation's accounting manual and procedures. The regional headquarters regularly perform a country review program where areas, such as organization, personnel, and accounting systems, are analyzed in detail. The techniques to evaluate the subsidiaries consist of the periodic comparisons of financial ratios and planned versus actual figures. A cost-plus mark-up transfer pricing policy has been traditionally used.

The chapter on Monsanto depicts a company that underwent divestitures and management reorganization in the early 1980s. Strategic planning flowing from the top down and a system of comprehensive annual budgets permeate the management control apparatus. A standard cost accounting system and a modified form of zero-base-budgeting complement the planning and control scheme. Annual reviews at the corporate level concentrate on variances against plan and other financial and non-financial criteria to compare the firm and its segments with its competitors. Unique for this case is the mention of normal adjustments for risk when evaluating performance in foreign units and an emphasis on local market prices when reviewing the performance of managers of foreign operations.

The most innovative approaches to internal reporting and control are those described for FMC Corporation and Borg-Warner Corporation. In 1983, FMC Corporation initiated a current cost accounting approach to measure performance in all its domestic and foreign operations. At the total company level the system permits the firm to gauge its success in real financial terms. The "Inflation-adjusted" numbers are solely for internal measurement since historical cost is still kept for external reporting purposes. The case mentions that the budget is still the principal control document and that variances are reviewed on as monthly and year-to-date basis. Computation of holding gains or losses is included in the measure of operational performance of foreign subsidiaries.

The case of Borg-Warner Corporation is an example of a novel style to view the internal auditing function. The company adheres to a philosophy of decentralization and applies a team approach to the evaluation of the performance of its business units. This is accomplished through a control evaluation review technique applied by management control analysts (formerly internal auditors) that focuses on identifying operational problems and their causes. The role of the internal auditor has switched from that of an adversary to one of an advisor. The traditional internal audit report has been replaced by an action plan that makes management an involved party in implementing potential improvements.

The administrative and control systems of GoldStar Electronics conform to the South Korean management philosophy of "inhwa" or harmony among people. This concept is diametrically opposed to the divergent principal/agent relationship found in the "agency theory" of management common in western economic systems. The core of the evaluation system for GoldStar is the profit center unit. There is heavy reliance on long-term and profit planning and on the comparison of actual versus planned results. Because of the "inhwa" approach, however, more flexibility and adaptation occur when the individual profit units are evaluated. There are many

performance indices available, both financial and otherwise, from which to measure the unit's profit or service contribution to the company.

The two European companies were selected from among those of a larger sample studied by Professor Schoenfeld. Alldelphi Germany is a German subsidiary of N.V. Philips and controls numerous other business units and companies worldwide. Their evaluation of business performance is built upon replacement cost and budgeted cost standards in addition to performance indicators of a non-financial nature. The European control system described reflects the unique features of imputing interest charges for capital employed and of introducing physical quantity gauges for resource utilization. Nixdorf Computer, the other firm reviewed exemplifies a tightly controlled, marketing-oriented enterprise. Operational performance of all the business units is achieved through a series of indices that compare actual results against historical and budgeted parameters. A very detailed analysis of growth, productivity, pricing, financing, advertising, and similar indicators is periodically undertaken. Peculiar to Nixdorf is an annual contest sponsored by the company to reward the best performing subsidiary.

The three chapters on the views from independent accountants address different aspects of the management accounting systems of multinational corporations. The paper by Lenz Neuhauser, a German CPA transplanted to the practice of a U.S. accounting firm, is the one that most adequately and completely portrays the issues and developments in MIS for multinational firms. In it we find reference to the six topics identified as unique to international operations, namely: (1) foreign currencies, (2) transfer pricing, (3) foreign country risks, (4) imputed interest costs, (5) foreign inflation, and (6) overall performance measures. The author provides a series of suggestions to deal with these issues and observations about how European, Japanese, or U.S. multinationals have approached them. The second paper, co-authored by two U.S. external auditors, refers to return-on-investment and actual versus budgeted performance as the most common tools to monitor foreign operations and discusses some of the shortcomings that those techniques carry. Finally, the chapter by Lanferman, a German professional accountant, focuses on the role of the external auditor in the acquisition or sale of business units. Emphasis is placed on the gathering and evaluation of information of the unit targeted for acquisition and on the special considerations made for the specific case of foreign investments.

A concluding chapter by Professor Schoenfeld offers an overview of the current state of performance evaluation in multinational firms. As evidenced from the cases presented, the evaluation methods employed are insufficient to evaluate properly a business unit's performance. The actual performance of a company is influenced by the interaction of outside (i.e., business, industry, and environment) and inside (e.g., firm organization and strategies) variables. Accounting has not been able to integrate all of these into its performance evaluation model. This shortcoming is accentuated when the unit under review is a foreign subsidiary, since the factors influencing performance increase in number and complexity. Performance evaluation of foreign subsidiaries still follows a traditional pattern of strategic planning, short-term budgeting, continuous reporting and periodic reviews. There is also a surprising commonality in the type of reports and their periodicity that multinational companies require from their foreign affiliates. Still, as expressed by the top management of the corporations

surveyed, accounting data alone are not sufficient to detect early warnings or insights of trouble spots. Hence a trend has developed to incorporate non-accounting, qualitative factors in the analysis.

As a whole, this monograph documents the current practices of managerial accounting as followed by seven multinational firms based in three distinct geographical regions. Interspersed in the descriptive discussion of the cases are references to issues unique to the operations of foreign affiliates, such as foreign currency translation and transfer pricing. The book allows management accountants in multinational corporations to compare practices in their firms against those reported in the case companies studied. For the international accounting scholar the monograph is useful in pinpointing those areas in the evaluation of foreign operations where the pursuit of more adequate solutions is still necessary.

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INSTRUCTIONS FOR AUTHORS

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting." Accountancy (March 1972), 4-8.

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A General Theory of Financial Reporting: Is It Possible?

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Key words: A general theory; Financial reporting; Information needs

Abstract: *The aim of this paper is to describe the circumstances under which it is possible to develop a general theory of financial reporting. For the purposes of this paper a general theory is defined as a set of interrelated and consistent propositions independent of, but relatable to, real world phenomena which explain and guide actions in a strictly defined area of endeavor. Financial reporting is defined as the provision of necessary but not sufficient information to investment decision makers. In the interest of simplicity, several complicating factors are assumed not to exert an influence on the arguments developed. The paper assumes no costs of information and that accountants have a competitive advantage in the production of financial information in traditional income and financial position statements. The essence of this paper is to demonstrate analytically and practically that information that is necessary but not sufficient for investment decision making does exist.*

In an article published in 1975, Professor Robert Sterling argued that "We accountants do not solve issues" that " . . . we move from one unresolved issue to another, while the stock of unresolved issues continues to increase" (1975, pp.28, 34). The primary reason cited by Sterling in support of his argument was that accountants defined their problems in a manner which made their resolution impossible.

A similar sort of reasoning can be leveled at arguments, the conclusions of which question the efforts of those who have tried to develop a general theory of financial reporting.[1] It is argued in this paper that those who deny the possibility of such a theory usually specify the problem in a way that makes it impossible to contemplate the development of such a theory.[2]

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A Particular View of Accounting

That differences in individuals' perceptions may lead to significant rifts and competing schools of thought within a discipline is a view well documented by Kuhn (1962). Such a rift is clearly evident in accounting over the issue of whether it is feasible to develop a general theory of financial reporting. In spite of constant pleas by groups, such as the American Accounting Association's Committee on Concepts and Standards for External Reports (1977), to develop a comprehensive theoretical base to aid accounting rule-makers, none of the attempts to achieve this goal has been generally accepted. In fact, quite the contrary. An increasingly popular view is that this level of theorizing is impossible. This view emanates from a number of individuals and groups who argue (explicitly or implicitly) that because every user wants something different from financial information, it is useless to contemplate the development of a finite set of financial data relevant to all users. Correspondingly, financial reporting cannot be based on any one theory or set of technical guidelines.

A corollary to this argument is that the setting of reporting standards must be politically based. That is, reporting standards must be responsive to the temporary exigencies in the democratic process, making allowances (through compromise) for conflicting views. In support of this proposition, Gerboth maintains that "In a society committed to the democratic legitimization of power, only politically responsible institutions have the right to command others to obey their rules" (1973, 481). He argues that there can be no "comprehensive" problem solving base (general theory) in accounting; there can only be an incremental approach in which inconsistencies and cognitive leaps are necessary steps of progress. In this view of accounting, accounting is portrayed as a discipline devoid of a consistent intellectual framework, that is, a discipline in which reason and logic play a minimal role in knowledge development.

Besides Gerboth, many other individuals and groups have also lost sight of the possibility of a general theory of financial reporting, preferring to concentrate on the differences rather than the similarities in user needs. These include: Revsine (1969, 1970), Staubus (1976), Demski (1973, 1974), Watts and Zimmerman (1979), Stamp (1979, 1981a,b) May and Sundem (1976), an American Institute of Certified Public Accountants' report entitled "Objectives of Financial Statements" (1973), the American Accounting Association Committee to prepare a "Statement of Basic Accounting Theory" (1977), the UK "Corporate Report" (1975) and the Canadian Institute's study entitled "Corporate Reporting: Its Future Evolution" (1980). Demski (1974), for example, was preoccupied with the task of trying to frame the problem of choice between accounting alternatives. An implicit assumption in his work was that financial options and the information relating to them were mutually exclusive thus forcing a choice. While none of the above suggested that theory and research did not have some part to play in shaping accounting rules, it was clear, however, that they dismissed (in some cases apparently without recognizing it) the possibility of developing a general theory which would consistently guide rule makers in an unbiased fashion, and which would serve as a justification for accounting standards. In this latter respect Watts and Zimmerman commented, "In our view, accounting theories have an important role . . . although it might not be the role envisioned by

the theorists. Instead of providing "an underlying framework" for the promulgation of "sound financial reporting practices" by standard-setting boards, accounting theory has proven a useful "attic to buttress one's preconceived notions" . . . As a consequence, not only is there no generally accepted accounting theory to justify accounting standards, there will never be one" (1979, 300–301).

Working from the premise that different users require different financial information, developers of a general theory have, in the view of those listed above, necessarily to contemplate a theory with a non-exclusive domain[3] and one which would allow inconsistencies and cognitive leaps, both of which are foreign to the general understanding of the term "theory". In other words, the way in which they viewed or defined the financial reporting environment made it impossible for them to contemplate the existence of a general theory. An important theme in this paper is that if a general theory of financial reporting is worth seeking, we must reconsider the boundaries of accounting, so that in the words of Sterling, a general theory becomes at least a possibility if not a probability. Before we do this however, a little more background is warranted.

An Historical Perspective

During the 1950s and early 1960s several academics including Chambers (1966), Sterling (1970), Edwards and Bell (1961), Ijiri (1967), and Mattessich (1964) attempted to develop general theories of financial reporting. Ignoring arguments as to whether the outputs of these works were in fact general theories, the object of the works was the establishment of some common definition/objective of accounting which would in turn point to a unique way of valuing assets and measuring income and financial position. These attempts were made in efforts to solve the problem of irregularities and inconsistencies in financial reporting, thought to be a direct result of the bushfire approach (i.e., considering issues as if they were mutually exclusive) used by accounting research bodies at that time (Henderson and Peirson, 1974).

For a number of reasons these endeavors met with little acceptance. Not the least of these reasons was the fact that its proponents argued amongst themselves over the validity of what each had proposed.[4] Undoubtedly the major criticism, however, was the denial of the existence and usefulness of a single measure of income and financial position and the substitution of the idea that different users required different information, perhaps multiple measures of income and financial position. For these sorts of reasons the "general theory" approach to financial reporting was quickly overshadowed by several alternative approaches.

One such approach was referred to as the "events" theory of accounting. The origin of this approach can be traced to "a divergence of opinion among members of the committee of the American Accounting Association which issued "A Statement of Basic Accounting Theory" (Belkaoui, 1981, 34). The majority of committee members favored the "value" approach to accounting, which considered the needs of users were known sufficiently to permit an accounting theory that provides optimal input to specified decision models. However, one member, Professor George Sorter, favored the "events" approach. Based on the idea that one information set cannot be

optimal for all users, the "events" approach sees the accountant's function as simply providing information of events (none of which are specified ex-ante) leaving to the users the task of fitting the events to their particular decision models. Although not the same, it bears a strong resemblance to the multi-column reporting school. Both adopt an approach might might be labeled "data expansionist". Although the concept involved is intuitively appealing, both approaches fail to provide any better solution to the problem of choice between accounting measurement systems than did the general theory approach. Ironically, this has occurred as a direct result of attempts to cater for different users' needs. Highlighting this problem, Revsine commented " . . . implementation necessitates knowledge of users' decision models. Thus *data expansion* would seemingly require the same decision model knowledge that its proponents sought to circumvent" [emphasis added] (1970, 711).

To some extent supported by the lack of acceptance of either of the above alternatives, another alternative has gained prominence. This alternative is known as the "predictive" approach to accounting theory. The rationale which underlies it is that choice among different reporting options is best made in terms of the ability of particular options to predict events of interest to users. Two streams can be identified. The first is concerned with the ability to explain and predict economic events, and the second, to explain market reactions to disclosure. An implicit view underlying this approach is that the usefulness of reporting options is best gauged by how the information affects the price formation process. Although significant attention has been accorded both steams, the latter has dominated attention. Confirming this, Hakansson states "Over the past decade the so-called 'efficient markets' literature, originating primarily in finance, has had a most pervasive influence on accounting research" (1976, 27).

Although this approach to theory does not explicitly assume from the outset that user needs are different, by not specifically directing its research to discover common user needs, its findings are biased towards the former position. It is quite conceivable that thousands of events are likely to be significant to different users and equally conceivable that information needs are likely to be contradictory given the fact that users are permitted (by a conscious policy of the researcher not to become involved) to favor particular information sets which condition events in a way which is favorable to them (the users). In other words in trying to be unbiased the research method permits the biases of statement users. The consequent demand for different and often contradictory accounting information makes it impossible, therefore, to envisage a theory which will cover all these demands. The end result must be a theory which permits inconsistency which is a contradiction in terms.

It is worth noting of this research method that, in trying to be unbiased, no initial bounds (or at least very nondescript bounds) are accepted for what constitutes accounting information. Curiously therefore, in attempting to avert the value judgments of a definition, this research method endangers the very properties of a discipline which it seeks to enhance, namely, professional and intellectual status. Professional status is accorded a discipline by society where members of that discipline accept responsibility for their actions in strictly bounded endeavors. Society recognizes and rewards their skill and capacity for expert service in a limited field (Chambers, 1966, 357). Conversely, where boundaries are not defined or where accounting is

defined so broadly as being those functions which, under the direction from users accountants perform, professional status becomes difficult to sustain and is likely to suffer. Similarly, intellectual status is accorded disciplines which have established research traditions. One need only view the physical sciences to establish their intellectual status. Thus, if we do not adequately define accounting from the outset, it is difficult to talk of a research tradition in accounting, for there is nothing with which to associate the research tradition.[5]

Although it has been argued elsewhere (Wells, 1981) that security market research is not necessarily at odds with the notion of a general theory of financial reporting, this need not concern us here. This approach and the one preceding it focus explicitly and/or implicitly on the idea that every user wants something different from accounting information. This reason lies at the root of arguments and methods which deny the possibility of a general theory. It is only natural, therefore, that opponents should, as a first step, try to demolish it. This endeavor turns out to be a hopeless one, however, because it cannot be denied that people and organizations *do* want and expect different things from accountants. Company management, for example, will always want to be shown in a light which reflects their expectations of what people like to see. Thus, different managements with different expectations will encourage and have encouraged the use of vastly different, often irreconcilable, reporting methods. An example is the manner in which mining companies treat their exploration costs; some write the cost off as incurred; some spread them over future periods; still others match them against revenues produced by the particular ventures for which the costs were incurred. The question is should they be allowed to choose a particular reporting method where such a choice may cause disadvantage to other parties. Chambers has argued that "To contend that managers shall have what they demand, where what they demand may prejudice the preservation of the interest of others . . . is to forego professional independence" (1966, 358).

It is one thing to say that the above situation is occurring but it is quite a different matter to suggest, as Gerboth and others have, that it is necessarily the way it must remain. This argument of self-interest has been taken to such lengths that there are now suggestions that explanations (theories) developed by academics are prompted by self-interest such that managers will encourage academics to develop theories which appear to be in the public interest but which in reality are " . . . 'excuses' to cover a self-interest motive . . . " (Watts and Zimmerman, 1979). Little "hard" evidence has been presented to support this suggestion.[6] If this is an accurate summary of the current state of accounting, however, then it is extremely important to examine the implications for financial reporting of the adoption of such an attitude.

The Negative Aspects of Politics in Accounting

To avoid possible confusion, it seems important to re-establish what is meant by politics in accounting. In this paper politics denotes a situation of conflict necessitating a strategy of incrementalism, wherein compromise and exceptions to the rule occur. Chambers has argued that this strategy leads to a process of development which is circular and self-defeating in that it leads to a " . . . vast proliferation of alternative

possible rules, having demonstrably contradictory effects" (1966, 355). Further, because the acceptance of new rules is not regarded as the occasion for jettisoning less acceptable rules, Chambers argues that" . . . the whole body of accounting lacks the disciplined and orderly quality which characterizes systematic development" (p.356). Support for Chambers' view is provided by Kawaguchi (1976). Speaking of the research strategy of the International Accounting Standards Committee, Kawaguchi commented, "While compromise is said to be the secret of success . . . it may lead to a loose standard that cannot gain general acceptance" (p.250). He further states that "Compromise is the mother of inconsistent logic and divergent alternative methods in the accounting standards". The response to these implications, by Gerboth and others, is to suggest that inconsistencies and irregularities must be accepted as inevitable. The decision as to whether or not the systematic development, mentioned by Chambers, is worth seeking seems to be the point over which Gerboth and Chambers disagree.

Gerboth maintains that for three reasons – the difficulty in securing agreement as to objectives, the lack of theory in specific problem areas, and the lack of knowledge of decision consequences – that " . . . rationality as well as prudence lies not in seeking final answers but rather in compromise – essentially a political process" (1973, 479). Although agreeing with Gerboth's observations about current practice, Chambers argues that the solution lies in becoming more disciplined in the approach to accounting rather than accepting that " . . . excellence may well be found in the seeming irrationality of present practice" (Gerboth, 1972, 47).

Chambers refuses to believe that there is no consistent intellectual basis for the things which accountants might do. "Might do" is important here because it seems Chambers would not maintain that there is any consistent intellectual basis in the actions of accounting practitioners. Trying to develop such a base means rationalizing the inconsistencies and cognitive leaps which inevitably pervade accounting practice. Such seems to be the end result of the works of Gerboth and May and Sundem (1970).

The next section of this paper outlines an alternative framework for financial reporting to counter the arguments of Gerboth and to support the arguments of those who recognize the possibility of a general theory of financial reporting. This alternative view, while accepting the validity of the statement that different users want different things from information currently supplied by accountants, depends on an extension of this premise. This extension recognizes that in spite of differences in information needs, there are aspects of financial information which everyone, irrespective of his decision environment, cannot do without. Accepting the validity of this premise, it becomes difficult, but not impossible to contemplate an accounting framework which does not produce conflict among users for different pieces of information and does not produce motives for political lobbying. It might still be argued that conflict may result from attempts to report differently (measure) the common information requirement. This, however, does not constitute a problem in principle for our new framework but one of measurement or approximation.

To support the premise that all users of financial information want some common information, we must begin by establishing the objective of financial information in total. The answer(s) to this question will lead us to the identification of an objective

of accounting information. It seems reasonable to choose as this overriding objective the idea that all users of financial information want and need to make economic decisions.[7] That is, they want to know from time to time, in the light of financial information, whether the advantage they expect to derive from investing in a given set of resources is greater or less than that from not investing in some alternative resource set.

Financial Information

To reach this decision, users require information. This information can be possessed of three temporal dimensions. It can be information relating to the past, to the present, or to the future. Given these various dimensions, the question which must be addressed is which (alone or in combination) of the above will be needed by decision makers to make buy or sell decisions. Answering this question necessitates a close examination of the decision process. Fig. 1 summarizes this process in three steps. These steps include the identification of alternatives, the analysis of consequences, and the choosing of preferences. The three steps are combined to take an action.

Determine Alternatives	Predict Consequences	Select Preferred Alternatives	Take Action
a_1	c_1		
a_2	c_2	c_2	a_2
.	.		
.	.		
.	.		
a_n	c_n		

Fig. 1. *Alternatives* denote courses of action which are feasible within the limits of the general purchasing power equivalent of the resources at one's disposal at the point just prior to making a decision. As such, this corresponds with information of the present temporal dimension. *Consequences* refer to the possible outcomes of different alternatives. This necessitates some prediction of the likely monetary advantages and disadvantages likely to occur. For this purpose information of the future dimension is required. *Preferences* are the personal deliberations of the decision maker. Although we know little of how an individual reaches a decision, it seems reasonable to accept that a decision will seldom be made without some recourse to past similar decisions and past information. For example, to gauge the ongoing profitability of an enterprise a sequence of past profit figures will often be compared. Thus, information relating to the past may be used in the determination of one's preferences.
(Adapted from Sterling, 1972, 198–208)

From a purely abstract point of view, information on each of the three steps is input into a decision model. Contributors of information to this decision model include the decision maker (who inputs his personal preferences), the accounting information network, and many other sources. While it is clear what the decision maker inputs into the decision model, namely, personal preferences, it is not clear what information the accounting information network is to provide to the model. Resolving this dilemma is the essence of the task before us. We must decide what information it is impossible or unnecessary for accountants to provide.

One method by which one might justify a restricted information flow to decision models is via the argument that it is impossible for the accounting information network (as it is any information network) to supply all possible financial information. As convenient as this argument is, however, it suffers from a major problem, namely, that the exclusion of particular information becomes more or less an arbitrary decision and will remain so until it is first decided what accounting involves. To avoid this problem we begin by attempting to identify and eliminate that information which is redundant or unnecessary (as far as accounting is concerned) to reach an economic decision.

Comparison of the three information dimensions with the three-step decision process indicates that one information state, past information, is only relevant to the decision process in so far as it indirectly conditions a user's preferences. Combine this idea with the knowledge that the user already knows his/her own preferences and the provision of such information by accountants seems almost redundant except as users prefer to use the product of former statements prepared by accountants.

The elimination of the need to supply information of user preferences leaves two aspects of a current decision process for which the accountant can supply relevant information: information as to alternatives and information as to the consequences of adopting particular alternatives. These accord with the two remaining information states of present and future information.

Accepting that the accounting information network is able to provide information on both remaining aspects, the question arises what is (are) the consequence(s) if it provides both? Positing no change in the traditional accounting information network of balance sheet and income statements, doubt can be raised about the propriety of including present and future (price) information in these financial statements. The doubt arises for the following reasons. First, because of legal requirements necessitating aggregation and subtraction in balance sheets and income statements, and second, because of the different valuation rules which spring from a present or future outlook.

Consider the valuation of assets in the context of this latter problem. Adopting a "present outlook", could give rise to a situation where assets are valued at their current selling price. Conversely, adopting a "future outlook" could give rise to a valuation where assets are stated on the basis of their discounted cash flows. While we do not question the propriety of the individual valuations, we do question their aggregation and subtraction in conventional financial statements. Permitting the addition and subtraction of the numbers resulting from these two different valuation bases resembles adding or subtracting apples and oranges. The resulting numbers tell you nothing of either of the items mentioned. From a financial perspective, adding dollars of today to dollars of tomorrow gives one no accurate indication of one's wealth[8] in either today's or tomorrow's dollars. The resulting figure does not correspond with any identifiable characteristic of an investment decision. Some decision must be made therefore as to what sort of information, present or future, is to constitute the nucleus of the financial accounting information system. In support of this decision process Sterling has commented, "The accounting system cannot supply all the information desired by all decision makers and therefore, we must decide to exclude some kinds of information and to include others" (1972, 202).

To help choose between present and future price information, five points seem relevant. First, it has been commonly accepted in accounting that traditional financial statements relate to the past up to a dated present. They have at no time been taken to refer to the past up to some future period. Accordingly, from the point of view of what it is that financial statements are expected to include, future price information is excluded.

Second, a well-accepted objective of the preparation of financial statements has been to consider the progress made over time by a business.[9] Financial statement users make economic decisions to invest or withdraw from a firm on the perceived progress of a business. Progress is not interpretable or verifiable however, where its estimation goes beyond a dated present. Progress for the purpose of decision making depends on identifying the difference between the past and the present. Nothing can be said of progress unless we can make objective measurements at two points in time. An agreement on the present value of a property is much more likely at the present than it is for some time in the future.

Third, in the accounting environment, there are two basic parties, actors (people who use financial information to make decisions) and score-keepers (people who provide financial information). The actors try to achieve goals while the score-keepers provide information to help in the attainment of these goals. Although it is possible that these two functions might be performed by a single individual, they are usually separated (as in the case of financial reporting) so that the performance of one is not influenced by the other. Earlier it was implied that actors already have realizable goals. In point of fact they do not because before they can establish these they need to know their present position. Only with this knowledge can they decide what goals are available and attainable.

Fourth, empirical evidence (Chambers, 1981) supports the proposition that users of financial information need some common information. This includes information concerning liquidity, financial performance or progress, and gearing. For these purposes, information which relates to the future is of no relevance.

Fifth, from the point of view of accepting "professional responsibility" for one's actions, the reporting of present price information presents a much more defensible position for accountants than does future price information. This is because the latter inevitably involves some crystal ball gazing.

This new framework focuses on the provision of present price information as a means of indicating feasible decision alternatives. The three factors detailed by Gerboth, which deny the existence of any comprehensive and consistent explanation for accounting practice are no longer valid. First, we have suggested a common objective of financial statement users, the need to derive financial information relating to their individual investment decisions. Second, having strictly defined the nature and boundaries of financial reporting as being the provision of information of a present temporal dimension relating to the investment decision, we counter the concerns which led Gerboth to maintain that there was " . . . a lack of theory in specific problem areas".[10] Third, we have disputed the significance of the lack of knowledge about decision consequences, by defining the nature and boundaries of financial reporting, so that the provision of information of decision consequences, involving future information, is not within the accountant's function. For a more

formal model of the ideas in this section refer to the Appendix.

This definition restricts the presentation of information in financial reports to present price information. It is not easy to accept for it specifically excludes many of the services that accountants currently provide, such as budgeting.[11] It is, however, a necessary position accepting that the function of the financial accountant is that of a score-keeper unaffected by the advocates of alternative goals. The word necessary in this last statement is worth emphasizing for this new definition of financial reporting provides necessary but not sufficient information for making present economic decisions. There will be those who prefer to focus on future price information because for them this information is more interesting. However, they do so at the cost of the only pieces of finite and conclusive information available for making investment decisions. To reiterate an earlier point, only with the knowledge of the present position can viable economic options become apparent. To ignore this is to court economic disaster.

Conclusion

Based on the premise that every financial accounting user wants something different from financial accounting information, it has been logically argued that it is impossible to posit a general theory of financial reporting. Conversely, based on the premise that in spite of different people having different information needs, there are pieces of financial information common to every user, it has been argued that a general theory of financial reporting is possible. Faced with these two statements which cannot be faulted logically we were forced to view the implications of these two different world views for the financial accounting discipline.

The adoption of the former view is consistent with Gerboth's and others', that accounting is politically based, having necessarily to deal with conflict via compromise: a discipline for which there is no consistent intellectual basis. It is on this last point that Chambers and others take exception. They refuse to believe that accounting is necessarily politically based, that there is no consistent intellectual basis for accounting action. By carefully analyzing the accepted function of financial statements, the decision process, the needs of users, and the meaning of professional responsibility, Chambers for one has been able to develop a workable general theory of financial reporting, albeit one which places strict and unpopular boundaries on what financial accounting involves. As unpopular as these boundaries may be, however, they are essential if the pursuit of disciplinary rigor is to be attained.To try and stretch financial accounting theory to cater for all possible needs would not only be most likely impossible, it would violate the very essence of the term "theory".

Appendix

Assume than an individual has a stock of wealth, SW_0, which must be allocated between consumption, C_0, and investment, $SW_0 - C_0$. Assume that the individual has

already made an initial choice. The problem at hand is to decide what is the optimal consumption/investment choice for the next period, period 2, given that the individual is attempting to maximize his expected utility. This was precisely the perspective which Demski took, but as we shall see, the answer is entirely different.

The first thing to note is that the individual's consumption in period 1 is a random variable described by the following relation:

$$C_1 = (SW_0 - C_0)\ (1\ +\ _{ai}, s_j)$$

where $_{ai},s_j$ is the random rate of return on $SW_0 - C_0$ given a particular investment alternative, (a_i, = 1 . . . n), and given that a certain state (s_j,j = 1 . . . n), occurs.

Given an arbitrary information system, h, and a particular information signal Y_k (k = 1 . . . n), a utility maximizing, economically rational individual will choose a consumption/investment option described by the following

$$\text{Max. } V = U(C_0) + E[U(C_1)] \tag{1}$$

where $U(C_0)$ is the individual's one-period consumption utility, $E[U(C_1)]$ is the individual's preference for future consumption, E denotes the expectation of future consumption and $U(C_1)$ is the utility of consumption in period one.

Using the chain rule, differentiation of equation (1) with respect C_0 yields

$$\begin{aligned} \frac{dv}{dC_0} &= U(C_0) + \frac{d}{dc_1} E[u(C_1)] \cdot \frac{dc_1}{dc_0} \\ &= U(C_0) + E[u(C_1)] - (1 + {}_{ai}, s_j) \\ &= U(C_0) = E[U(C_1)\ (1 + {}_{ai}, s_j)] \end{aligned} \tag{2}$$

By setting equation 2 equal to zero and solving for C_0 we can product the optimal values of C_0 and C_1.

The point to note from this analysis is first, that C_0 cannot be determined without prior knowledge of SW_0, and second, that knowledge of SW_0 is independent of various alternative investment options, a_i, and states s_j. From this analysis, it seems clear that a utility-maximizing individual cannot make a consumption investment decision without first knowing his stock of wealth.[8] If we generalize this argument to business enterprises, we have least one piece of information for which it is possible to speak of an invariant information set. Consequently, if the aim is to develop a general theory of financial reporting, we have one piece of information in the decision process which can be said to be invariant with respect to decision-makers and decision alternatives, namely, present stock of wealth.

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Footnotes

1. For the purposes of this work financial reporting and accounting can be used synonomously.
2. An extensive search of the academic journal literature in the 1980s provides only one instance of a call for a general theory of accounting (Anthony, 1987). While it is tempting to conclude that the issue is resolved, this is arguable. The fact that professional journals continue to carry articles on the usefulness

of the conceptual framework project is evidence that the concept of a consistent intellectual base (albeit one step removed from a general theoretical framework) is still very much an issue in accounting. Consistent with the Sterling hypothesis the issue has simply been pushed into the background as newly emerging issues and academics (anxious to claim property rights over new issues) have competed for academic journal time and space. In the process some of these academics (e.g., Watts and Zimmerman, 1979) have even sought to rationalize the non-existence of a general theory. That the issue remains contentious, however, is evident in the very recent works of Chambers (1990) and Sterling (1989).

3. By non-exclusive domain, we mean that it would have to be inclusive in terms of admitting as part of accounting anything that an accountant did. The use of such a theory is indicated by Sterling, who stated that because "Such a theory cannot, in principle, deny anything, . . . it is totally useless except as an apology for what is or was".
4. See, for example, Chambers' reviews of Edwards and Bell (1965) and Mattessich (1966) and Mattessich's reply to Chambers (1967) and review of Sterling (1971).
5. For those who see the inevitable and possibly unwelcome presence of some ultimate value judgment in this statement, let them not be afraid. Instead, be comforted by the fact that all knowledge, even knowledge in the physical sciences, being processed by man, must be inevitably subjective?
6. The authors of the above work (p. 289) freely acknowledge the use of a technique known as "casual empiricism" which is nothing more than the accepted modern day substitute for the now unscientific term, "gut feeling".
7. Other writers to favor this specific objective include Sprague, Canning, Hatfield, and Staubus.
8. Following several standard definitions of wealth in economics (Keynes, 95) Fisher (p.52) Smith (p.76-7), Mill (p.9) Von Mises (p.262) Shackle (p.28) we define wealth as the goods in one's possession or at one's disposal x the market price of those goods.
9. Consider in this regard the work of Sprague, Hatfield, Canning, Paton, Staubus and Littleton.
10. We point to the work of R.J. Chambers, in particular *Accounting, Evaluation and Economic Behavior*, as evidence of the possibility of developing a comprehensive theoretical treatment of accounting focused on present price information.
11. This does not mean than an accountant cannot perform these services. Rather, he cannot perform them, and mislead those for whom the services are being provided, that they are services for which he accepts professional responsibility as an accountant. They should be clearly distinguished by way of a note and detailed in statements other than those reporting financial performance and position.

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Financial Statement Analysis of Italian Companies: Accounting Practices, Environmental Factors, and International Corporate Performance Comparisons

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Key words: International financial statement analysis; Comparative accounting practices; International corporate performance comparisons

Abstract: *This study explores the primary factors shaping accounting practices in Italy and the impact of these factors on the financial ratio norms of Italian firms. For this purpose a representative sample of Italian financial statements from different industries was analyzed. For each company, a set of selected financial ratios was computed and compared with ratios from the same industry and company size in the USA. The differences between the financial ratios of the two countries were examined for possible accounting, economic and the other environmental explanations. By tracing the factors affecting Italian accounting practices, and identifying their impact on Italian financial ratio norms, this article has sought to contribute to a better understanding of the mechanism through which accounting practices are developed internationally. Without this knowledge of specific accounting practices, comparisons of financial ratio norms across countries are meaningless.*

Introduction

Investor interest in Italy has increased rapidly recently as the rates of return of Italian companies are among the highest in Europe. Financial managers, financial analysts, accountants, and others have an interest in a better understanding of the environment which influences reported earnings and risk measures in Italy.

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This study explores the primary factors shaping accounting practices in Italy. It examines the impact of these factors on the financial ratio norms of Italian firms. The purpose of this research is twofold: to assist practitioners and to contribute to international accounting theory. To assist accountants, investors, and other potential readers of international (particularly Western European) financial statements, this paper endeavors (1) to provide a better understanding of Italian accounting practices and (2) to help forecast the direction and the approximate magnitude of the adjustments needed for more meaningful comparisons of financial performance across countries. To contribute to the literature regarding the developmental theory of accounting practices in different environments, this paper explores the determinants of the differences among international accounting practices and how these factors affect the financial ratio norms in difference countries.

Financial ratio analysis is a widely used tool for financial performance evaluation as it offers measures of liquidity, efficiency, risk, and profitability. The method of analysis should, however, be applied with great care to foreign companies. Each country has its unique set of norms for financial ratios. These norms are determined by such factors as the accounting principles and practices prevailing in the country, its tax regulations, economic conditions and market structure, the legal requirements, sociological considerations, and other environmental characteristics. Agguire and Hagigi (1987) discussed this issue in the context of Central American countries, especially Guatemala. Choi et al. (1983) investigated the use and misuse of international financial ratios in the context of South-East Asian, and particularly Japanese, corporate reporting. Gray (1980) presented European evidence regarding the impact of international differences from a securities-analyst perspective. Frank (1979) made an empirical analysis of international accounting priciples. Drury (1979) analyzed the effects of accounting practices divergence between Canada and the US.

Zappala (1973) critically overviewed the state of the Italian accounting profession in the early 1970s. He characterized it as "lacking progress" and cited many sources calling for reforms in this area. Rivola-Clay and Dupnik (1987) discussed some important developments which occurred subsequent to Zappala's study. In particular, they described the advances in the legislative and professional environment, the auditing and certification of financial statements, the stock exchanges' reforms, and the impact of the fourth directive of the European Economic Community (EEC).

The Italian case is particularly interesting because combined internal and external economic and political forces have recently produced significant developments in Italy's financial reporting practices. The Italian stock exchanges have emerged as a growing force in the Italian economy, bringing increased need for adequeate corporate reporting to meet the demands of the growing number of shareholders and their specific disclosure requirements. At the same time, the EEC member countries have continued their efforts to harmonize their accounting systems, thereby demanding additional reporting changes of considerable magnitude.

Our study concentrates on the implications of these and other accounting and environmental factors on financial statement analysis and corporate performance evaluation. For this purpose, a representative sample of Italian financial statements from different industries was analyzed. For each company, a set of selected financial

ratios was computed for three different years spanning the period of 1976–1986. Each of these ratios was subsequently compared to ratios from the same industry and company size in the USA. The differences between the financial ratios of the two countries were examined for possible accounting, economic and the other environmental explanations.

The next section describes the accounting and environmental settings in Italy. The third section examines empirically the financial ratios of Italian companies and compares them with financial ratio norms of similar industries in the USA together with results and analysis. The article concludes with some suggestions for prospective US readers of Italian financial statements, and offers suggestions for future research.

The Accounting and Environmental Settings in Italy

Economic Background

After World War II and until the early 1960s, Italy experienced considerable economic growth in terms of employment, production, and income. That growth, accompanied by a significant social and cultural evolution, transformed Italy from a predominantly rural culture to an urban society among those of the most industrialized nations in the western world.

The years of the "economic boom" were followed by unsettled conditions with a resulting decrease in enterprise profits, capital investment and employment, and an increase in labor conflicts (1963–1972).[1] Subsequently, the world energy crisis created an economic recession, accompanied by a high rate of inflation and considerable deficits in the national trade balances.

Despite the pervasive public presence in its basic industries, Italy does not have many formal Government restrictions; enterprises can operate in a market that is practically open to free competition. Lacking significant natural resources, the country depends to a great extent on imports. The economy is strongly integrated internationally, especially with the EEC countries.

Italian economic conditions have improved markedly since the early 1980s. The inflation rate has decreased. Interest rates have been lowered, and the labor force has become much more mobile. The unions have recognized that reforms are necessary to increase efficiency, to help the Italian companies be profitable and, thereby, to secure jobs for their members. In the early 1980s a law was enacted requiring employers to contribute regularly to unemployment funds. Obtaining substantial employers' contributions to the unemployment funds made the labor unions considerably less worried of the consequences of temporary unemployment among their members. This weakened their resistance to administrative reorganizations and to managerial attempts to mobilize employees. The increasingly mobile labor force allowed Italian companies to take advantage of technological advances using more capital-intensive techniques. By employing a more efficient ratio of labor to capital, the companies managed to reduce their costs further and to increase profitability.[2] Fiat Company, which recently has been transformed into a highly automated firm,

can serve to exemplify the "new view" of many Italian companies which are now technologically advanced.

Legislative and Accounting Settings

Since the mid 1970s major advances have been made in Italian accounting as the auditing profession has responded to changing economic, fiscal and political settings. One such important step was the 1980 enactment of the Presidential Decree of March 1975. This established audit and reporting requirements for listed companies. It is administered by the Stock Exchange Control Committee (CONSOB). Although the Italian companies' accounting practices still follow the Civil Code[3], CONSOB addresses issues not considered by the old Codes. The impact of CONSOB is increasingly manifested in corporate financial reporting. The most important recent Italian legislation concerning financial reporting relates to the stock exchange reform in 1984. CONSOB, which has been authorized to manage the stock exchanges, received the power to determine disclosure requirements and to monitor the exchanges. At the same time, the Italian Parliament established new requirement for publicly held corporations and modified the civil code. A 1985 Parliamentary Act further increased CONSOB's power as a self-regulating entity.

In spite of the significant improvement since the mid-1970s, Carins et al. (1984) found the overall quality of reporting practices in Italian companies to be unsatisfactory. The reported income is biased downwards because of the conformity between income figures for financial reporting and for tax purposes. Moreover, there has been a reluctance to disclose accounting information, and, even when the information is disclosed, there is a tendency not to reveal the accounting methods and policies employed in deriving the reported figures.[4] The Civil Code does not require the preparation of consolidated financial statements or use of the equity method. Listed companies, however, are given more specific directions by CONSOB which requires a recent copy of financial statements from companies controlled by the parent company. Consolidated group financial statements are required "whenever it is deemed necessary." According to Gray et al. (1984) and Oldham (1987), consolidated financial statements are typically not prepared in Italy. As in other European countries, many Italian firms tend to use hidden reserves; the Italian law does not require firms to disclose the movements in these reserves.[5]

The 1988 survey of the International Accounting Standards (IAS) Committee reveals that in 1984 most of the listed and approximately one-half of the non-listed Italian companies conformed to the IAS. Consistent with these findings, the larger firms that issue shares on international exchanges disclose more detailed and better quality information than does the other smaller and less internationally traded companies. In particular, the differences in Italian reporting practices and the IAS requirements for business combinations and segment information (IAS 14) income taxes (IAS 12); and leases (IAS 17) are noteworthy.

Italian practices follow a highly formalized system of accounting based on the Napoleonic Code and conform with tax laws. A company's management has a detailed prescription of accounting rules to follow in preparing financial statements. France, Belgium, and Spain have somewhat similar financial reporting practices; however,

the recent Anglo-Saxon influence on style and content seems to be stronger in the Italian case. The recent EEC Fourth Directive is also expected to exert a strong influence and create some fundamental changes. Financial statements will be required to present a "true and fair" view rather than a "clear and precise" view of the financial position.[6] Moreover, the emphasis will be shifted from the legal form to the economic substance of a transaction. Although the EEC's directives have not been enacted yet in Italy, they have already occupied the thoughts of many Italian corporate accountants and decision-makers, who will experience significant flexibility limitations in their reporting practices if these are adopted. The difficulties they will encounter are similar in nature to the hurdles found in following the IAS requirements. Oldham (1987), among others, views some of the CONSOB requirements for listed Italian companies to follow the IAS as an important step forward towards adopting the EEC directives.

Despite the lengthy, iterative process required by the Italian legislative system, Italian accounting regulations have continued to progress. One of the driving forces in this area is the Consiglio Nazionale dei Dottori Commercialisti (CNDC), the national association of commercial experts and consultants who hold the degree of "doctors of commerce" after passing the appropriate examinations. This entity advises the Italian Parliament, the legislative and executive branches of Government, and the business sector in general. The CNDC's influence has increased over time and its committees have issued an increasing number of statements of accounting principles and auditing standards.[7] In spite of all this progress through legislation, the current Italian reporting rules can, to some extent, be interpreted differently by different individuals. The progress in national accounting legislation is, however, still expected to continue at a significant pace.

Appendix C presents a more detailed discussion of these issues.

Financial Ratios of Italian Companies Versus US Norms

The empirical portion of this study examines the impact of the factors discussed above on the financial ratios of Italian companies. It explores the changes in these ratios over time, identifies the unique characteristics of Italian financial ratios, and analyzes the major differences between the ratio norms of corresponding Italian and USA industries.

Data and Methodology

A sample of 34 Italian companies from different industries was randomly selected and evaluated for 1986, 1981 and 1976. Twenty-five firms were initially selected, but because of data-availability and consistency problems for some of these firms, nine more companies were added to the initial 1986 sample. The added firms (for the years 1976 and 1981) were selected to preserve a similar mixture of industries in each of the three investigated years. The sample spans manufacturing, wholesale, and retail companies. The main Italian industries represented are: food (approximately

Table 1. Financial ratios of Italian firms in 1976, 1981, 1986 and their relative changes

	Financial Ratios			Relative Change (%)	
	I_{1976}	I_{1981}	I_{1986}	$\frac{I_{1988}-I_{1986}}{I_{average}^{a}}$	$\frac{I_{1986}-I_{1981}}{I_{average}^{a}}$
Return of equity	−14.37	13.21	26.25	3.30	1.56
Return of assets	−0.72	2.96	7.35	1.15	1.37
Profit margin	−1.56	2.42	6.74	1.57	1.71
Assets turnover	1.33	0.95	1.20	−0.33	0.22
Receivable turnover	7.21	7.87	7.50	0.09	−0.04
Inventory turnover	5.42	4.04	5.90	−0.27	0.36
Quick ratio	0.64	0.54	1.15	−0.13	0.78
Current ratio	1.35	1.02	1.69	−0.24	0.50
Debt/Equity	5.16	3.62	2.87	−0.40	−0.19
Interest coverage	1.35	1.22	3.27	−0.07	1.05
Tax burden	−0.26	0.18	0.43	3.67	2.08

$$^{a}I_{average} = \frac{I_{1976}+I_{1981}+I_{1986}}{3}$$

24 percent), publishing (approximately 18 percent), textiles (approximately 12 percent), and other industries representative of Italy, such as pharmaceuticals and automobiles. Both listed and unlisted companies are equally represented in this sample. The data were gathered from the firms' annual financial statements and supplemented from R & S.[8] A list of the sample firms is presented in Appendix A.

A list of selected financial ratios and their definitions is presented in Appendix B. The financial ratios of the Italian firms in the year 1976, 1981, and 1986, together with the relative changes over time, are given in Table 1.

For every Italian firm for each year, the financial ratios were compared to the USA ratio norms in the same industry. The financial ratio norms of the USA industries were obtained from the *Annual Statement Studies* of Robert Morris Associates supplemented by data from the COMPUSTAT tapes. The comparison between the Italian financial ratios and the related USA norms is presented in Table 2.

The ratio differences between the Italian firms and their USA counterparts were divided by the US ratios to provide insight into the relative magnitude of the differences. Because the Italian ratios relate to individual firms, they are sometimes (although rarely) irregular, e.g., negative numbers. Therefore, we placed the US ratios (which are industry averages) in the denominators. We have used the *t*-tests to measure the statistical significance of the differences, as these measures are widely accepted for this purpose and they can be easily interpreted intuitively. The *t*-values reflect the relative differences in the means of the two countries, taking into consideration the variability of the ratio distributions. The *t*-measures make, however, some strong assumptions about the nature of the ratio distributions. Therefore, in addition to the *t*-test, we also have analyzed the Sign-Rank-Test, a non-parametric test which makes no assumption as to the characteristics of the ratio distributions.

Table 2 indicates a consistent improvement in the financial position of the Italian firms compared with their US counterparts. For example, the Return on Equity Ratio that was significantly better for the US firms in 1976, was significantly better (although with a smaller magnitude) for the Italian firms in 1986. In 1981, there was no significant difference between the ratios of the two countries.

Table 2. Difference between selected ratio norms of Italian and US companies, 1976, 1981, 1986, and their statistical significance[a]

	1976			1981			1986		
	$\frac{USA - I}{USA}$	Statistical significance		$\frac{USA - I}{USA}$	Statistical significance		$\frac{USA - I}{USA}$	Statistical significance	
		t-Test	Sign-Rank Test		*t*-Test	Sign-Rank Test		*t*-Test	Sign-Rank Test
Return of equity	1.67	0.0045	S	0.06	0.7788	N	–0.41	0.0273	S
Return of assets	1.25	0.0010	S	0.35	0.0136	S	–0.15	0.3243	N
Profit margin	1.48	0.0004	S	0.24	0.2036	N	–1.03	0.0030	S
Assets turnover	0.40	0.0001	S	0.26	0.0001	S	0.39	0.0001	S
Receivable turnover	0.43	0.0001	S	–0.04	0.9331	S	0.25	0.3162	S
Inventory turnover	0.32	0.0004	S	0.20	0.0058	S	0.06	0.6260	N
Quick ratio	0.20	0.0213	S	0.03	0.6451	N	–0.55	0.0118	S
Current ratio	0.12	0.1559	N	0.09	0.0145	S	–0.16	0.2433	N
Debt/Equity	–2.68	0.0012	S	–1.70	0.0006	S	–0.63	0.0065	S
Interest coverage	0.73	0.0001	S	0.22	0.0151	S	–0.19	0.2052	N
Tax burden	1.65	0.0813	S	–0.15	0.6696	N	–0.43	0.3722	N

[a] The statistical significance is measured here by the *t*-Test and the Wilcoxon Sign-Rank Test.
For the Sign-Rank Test, the letters 'S' and 'N' represent 'significant' and 'not significant' respectively.

Results and Analysis

The aim of this section is to identify the unique characteristics of the Italian financial ratios, to analyze the major differences from ratio norms of the corresponding industries in the USA and to explain these differences.

Capital Structure

The Italian companies have been financed mainly by debt, and their Debt/Equity (D/E) ratios are considerably higher than those of their US counterparts. The trend during the period 1976–86, however, clearly indicates an increased use of equity financing in Italy. The primary reason for the heavy reliance on bank loans was the lack of developed equity markets in the past.[9] This factor has slowly and gradually decreased in importance because of the recent emergence of increasingly active stock exchanges in Italy.[10] Traditionally, after an initial investment by the owner family, most of the additional needed capital was obtained through bank loans. Recently, however, the high percentage of family-owned firms has gradually declined with an increase in both the size of the firm and the availability of funds through the Italian stock exchanges.

Two related factors contributed to this reliance on Italian banks for a capitalization source. The first was the desire of small companies to conceal certain facts about their operations. Immediately after World War II, many people wanted to work, but few jobs were available. Since there were no strongly organized labor unions, companies exploited the "cheap labor." Obtaining funds from banks rather than from public shareholders was, therefore, expedient; the banks could privately examine the information they needed without disseminating it to the public. A second incentive

to avoid equity financing was abolished in 1973. Until then, an annual tax (0.25%) was imposed on a company's equity. Owners could minimize this tax by limiting their equity and increasing loan financing. In addition to the avoidance factors, the lack of adequate regulation necessary to protect investors exerted a strong negative influence on change and progress in the pre-CONSOB period.

Profitability

The improved economic conditions in recent years have played the dominant role in explaining the changes in profitability ratios throughout the years 1976 to 1986. The inflation rate decreased and the interest rates were lowered. The increasingly mobile Italian labor force allowed firms to take advantage of technological advances using more capital intensive techniques. By employing a more efficient ratio of labor to capital, the companies managed to further reduce their costs and to increase profitability.

This study employs three measures of profitability: Return on Equity (ROE); Return on Assets (ROA), and Profit Margin (PM). The first two are affected significantly by the accounting methods used to measure various assets, liabilities, and income. The "sales" component of the PM makes it somewhat less susceptible to such arbitrary measures and is more dependent on economic factors. The differences between the first two measures reflect the impact of the relatively high financial leverage of Italian companies. Thus, the changing differences among the three profitability ratios in 1976, 1981, and 1986 (Table 1) can be explained as follows:

The PM indicates that in the early years of the period, the profitability of the Italian firms was relatively low. The high financial leverage of these firms increased the magnitude of their losses in 1976, as reflected in the considerably lower ROE ratios than ROA ratios in that year. Conversely, when the economic conditions improved in 1986 and the PM was positive, the high financial leverage of the Italian firms increased their profitability. Thus, the ROE ratios were considerably higher than those of the ROA indicating that the additional funds obtained through debt were used effectively. The rapid development of the Italian equity market and the diminishing use of bank financing have resulted in an increased motivation to show high profitability. As a consequence, the common practice of "hiding" reserves to deflate reported income is now somewhat less popular as the firms compete in the equity markets and are more motivated than before to reveal their positive earnings generating potential.

The accounting differences between the USA and Italy offer an additional explanation for the smoother pattern of the ROA compared to the ROE (as depicted in Table 2). Typically, Italian companies capitalize financing costs associated with purchased and sales on credit. As a result, the reported "inventories" and "assets" figures are biased upwards [11] and, accordingly, the profitability ratios are affected. In periods of greater sales activity, the effect of this capitalization on overstating recorded inventories is of a greater magnitude; the ROA is further understated.[12] Conversely, in periods of slower sales activity, i.e., in the mid 1970s, this bias is less noticeable.[13]

A comparison between the Italian and US ratios in Table 2 reveals that the differences in the PM do not translate into bigger differences in the other two ratios as might have been expected. The magnitude of the changes in PM from 1976 to 1981 and to 1986 are generally much higher than those of the ROE and the ROA. A possible explanation for this phenomenon is the difference in the tax laws between the two countries. The US companies are allowed to carry losses back and forward while Italian companies are not allowed to do so. Therefore, in the Italian case, there is an added incentive to smooth the income stream over the different periods. Accordingly, the accounting practices used for asset and liability valuations might have had a larger impact on the ROE and ROA than on the PM. This incentive was particularly important because, in the Italian context, tax considerations have dominated other concerns such as financial reporting, to the market participants.

The Other Ratios

The Interest Coverage Ratio (ICR) is affected by the heavy debt ratios of the Italian companies and their low profitability in the early years of the period. This situation improved considerably and the difference in the ICR between the Italian and US companies in 1986, therefore, is not significant.The trend of increasing Italian ICR ratios is a result of both an increase in profitability and a decrease in loan financing. The gradual and continued changes in the financing strategies of Italian firms have reduced their vulnerability to fluctuations in market conditions and decreased their financial risk.

The activity ratios (the three turnover ratios) have been relatively stable over most of the period 1976–86. In 1975 and 1979 inventory revaluations were required (The Visentini Law); the inventory turnover ratio was lower in these earlier years as compared with 1986.

The inventory turnover ratios also reflect the impact of the recent technological advances of the Italian firms. There has been consistent improvement toward maintaining lower levels of inventories due to recent improvements in controlling the production process and thereby reducing costs. During the early period of the seventies, the Italian labor force was relatively immobile, and high labor costs could be viewed more as a *fixed* cost than a variable cost. Since the same labor expense had to be maintained whether or not it was utilized in the production process, it was best to ensure a continuous supply of raw materials to avoid underutilization of labor. Therefore, Italian firms had maintained relatively large amounts of inventories. These levels of inventories have been consistently reduced since the early 1980s as the labor force has become more mobile and advanced technological production techniques have been employed by Italian industry.[14]

Asset turnover is consistently lower for the Italian companies than for their US counterparts. This might be a result of the more aggressive sales practices of the latter and their costlier advertising expenditures.

The Italian receivable turnover (RT) ratios have been affected by the different interest charges on receivables imposed by the Italian versus the USA sellers. The Italian firms charge, typically, only for the *opportunity cost* of the receivables, while

the US firms also charge a *risk premium* to compensate for the additional risk of not collecting the receivables. Many of the rates charged by the Italian firms are relatively lower and their average receivables are paid off during longer periods; thus, their RT ratios are consistently lower than those of the US firms.

Examining the liquidity ratios reveals that in both countries liquidity ratios improve with increases in the firms' profitability. This might be explained by the dividend policy of the US firms. The pressure to keep distributing stable dividend yields causes many US firms to distribute *relatively* more dividends in "good" times than will their Italian counterparts which are under considerably less pressure to do so. Italian companies typically prefer to reinvest their earnings instead of distributing dividends. For them, reducing the heavy loan financing is a more critical issue more than attempting to please current and potential shareholders by seeking an "optimal" high dividend yield policy. In the early 1980s, the Italian firms increased their investments in advanced technologies. Therefore, the 1981 ratios indicate relatively lower liquidity positions.

Finally, the tax burden seems to depend more on profitability in the Italian case than in the USA. The reason might be that there are more levels of corporate income tax rates than in the USA. This is particularly true following the US tax reforms of 1986.

Conclusions

This study suggests that without a thorough analysis and a subsequent series of adjustments based on this analysis, a comparison between Italian and US financial ratios cannot be meaningful. The existing biases in Italian financial reporting often give profitability ratios a downward bias. This results because the Italian stock exchanges are not yet fully developed and the financial reporting of Italian firms is relatively less oriented towards potential shareholders; it is more concerned with other factors, such as tax implications. There is, however, clear progress in this respect as equity financing is becoming gradually more popular in Italy. Italian companies typically use considerably higher financial leverage than their US counterparts. The recent emergence of the developing Italian stock exchanges together with other economic, taxation, institutional, and sociological factors is causing a clear trend towards reducing high financial leverage and moving towards increased equity financing. Additional sources should be consulted to supplement the incomplete information obtained through financial statements. Finally, the differences in the financial reporting practices between Italian and US firms, which have evolved from the different accounting, economic and environmental backgrounds of the two countries, must be considered.

In tracing the factors affecting Italian accounting practices and in identifying their impact on Italian financial ratio norms, this article has sought to contribute a better understanding of the mechanism through which accounting practices are developed internationally. Without this knowledge of specific accounting practices, comparisons of financial ratio norms across countries are meaningless.

An extension of this study and further research in this area might add another dimension, incorporating the expected new adjustments to the EEC directives and the related harmonization efforts among its members. It is now too early for such an endeavor.

Appendix A. The Sample of Italian Companies and Years of Financial Statements

Company	1986	1981	1976
1. Alfa Romeo			X
2. Alivar	X	X	X
3. Alitalia	X	X	X
4. Augusta	X	X	
5. Barilla	X	X	X
6. Benetton	X	X	
7. Buitoni	X	X	X
8. Cartiere Ri			X
9. Chiari & Forti			X
10. Ciga Hotels	X	X	X
11. Dalmine	X	X	X
12. Danieli	X		
13. Editoriale	X		
14. Farmitalia Carlo Erba	X	X	X
15. Feltrinelli	X		
16. Ferrero	X		
17. Fiat Auto	X	X	
18. Fidia	X		
19. Galbani			X
20. Italsider			X
21. La Rinascente	X	X	
22. Laterza	X		
23. Magneti Marelli		X	
24. Marsilio	X		
25. Marzotto	X	X	
26. Mira Lanza	X	X	X
27. Miroglio Tessile			X
28. Mondadori	X	X	X
29. Olivetti	X	X	X
30. Rusconi	X		
31. Star			X
32. Stefanel	X		
33. Zanussi	X	X	
34. Zignago		X	

Appendix B. The Selected Financial Ratios and Their Definitions

$$\text{Return on Equity} = \frac{\text{Net Income before Taxes}}{\text{Equity}}$$

$$\text{Return on Assets} = \frac{\text{Net Income before Taxes + Interest Expense}}{\text{Total Assets}}$$

$$\text{Profit Margin} = \frac{\text{Net Income before Taxes}}{\text{Sales}}$$

$$\text{Asset Turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$\text{Receivable Turnover} = \frac{\text{Sales}}{\text{Average Receivables}}$$

$$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

$$\text{Quick Ratio} = \frac{\text{Current Assets – Inventory}}{\text{Current Liabilities}}$$

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Debt/Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Equity}}$$

$$\text{Interest Coverage Ratio} = \frac{\text{Net Income Before Taxes + Interest Expense}}{\text{Interest Expenses}}$$

$$\text{Tax Burden} = \frac{\text{Tax Expense}}{\text{Net Income before Tax}}$$

Appendix C. Italian Financial Reporting Practices

Format and Content

The basic source for principles, content, and manner of preparation for financial statements is the Civil Code. Fiscal legislation, however, requires that tax returns be based on accounting records and, consequently, financial statements are somewhat affected by this consideration.

By law the directors of all limited companies must submit to their members at the annual general meeting the statutory financial statements containing:

- **Balance sheet** (Stato Patrimoniale)
- **Profit and loss account** (Conto dei profitti e delle perdite)
- **Directors' report** (Relazione del Consiglio di Administrazione), including a clear and precise view of the financial position of the company.

The **directors' report** should give all additional information considered necessary for a correct interpretation of the financial statements.

The principles of "Dottori Commercialisti" require a statement of changes in financial position (Prospetto dei fabbisogni e delle coperature finanziarie) and a statement of retained earnings (Prospetto delle variazone del capitale netto), and these are generally given for listed companies.

Public Filing Requirements

Under Italian law limited liability companies may be formed either as a Società per Azioni (S.p.A.) with a minimum capital of Lit. 200 million, or as a Società a responsibilità limitata (S.r.l.) with a minimum capital requirement of Lit. 20 million.

For all such companies, the deed of incorporation, articles of association, copies of annual financial statements, and a list of directors are available for public inspection at the Register of Business Enterprises held by the local Court in the company files.

Listed companies must file their financial statements and auditor's report with CONSOB which oversees the reporting requirements of companies listed in the stock exchanges.

Audit Requirements

Financial statements must be accompanied by a report of the directors and a report of the statutory auditors. Furthermore, for all listed companies, state controlled companies and certain other companies, the financial statements must be supported by the report of a registered auditing firm. Thus, a two-tier system operates.

In the first tier, any limited company with a shareholder's equity exceeding Lit. 100 million is required to have a board of statutory auditors ("collegio sindacale") who must report deviations from established accounting principles and monitor management to ensure that no illegal acts are carried out.

A statutory auditor is appointed by the company's shareholders who determine the auditors' remuneration. No relative of a company director is allowed to be a statutory auditor. He or she may, however, hold shares in the company.

No standard from of report has been developed so far for the "sindaci". They do not perform an audit as the term is understood internationally. Only individuals may act as statutory auditors and in practice they are generally, though not exclusively, selected from members of the professional bodies which are:

- Dottori Commercialisti (doctors of commerce) who hold a University degree in Economics
- Ragionieri (practicing accountants) who hold a college degree
- Avvocati e Procuratori (lawyers) who hold a University degree in law

For the second tier, a presidential decree in 1975 provided that from 1980 all companies quoted on the Stock Exchange are obliged to be audited by firms approved by CONSOB. This requirement has since been extended to a growing number of categories of companies such as insurance companies, shipyards, state-owned companies, newspapers and others. The auditing firm must be independent of the client company. In this case of obligatory audits, the appointment is for a term of three financial years, and it may not be renewed more than twice (i.e., a total of 9 years). The appointment may be revoked provided there is a just reason.

Valuation Principles

The Civil Code adopts the historical cost basis. Some fixed assets, however, were revalued under new laws that passed in 1975 and 1982, applying specified coefficients (calculated from inflation statistics)to fixed asset costs or net equity values. The revaluations could be used only if the asset's current economic value was shown separately in the balance sheet. In that case, the revised values could be used to increase the shareholder's equity or to cover losses. This surplus is not subject to taxes.

Depreciation

The Civil Code provides that depreciation should be charged on all categories of assets on the basis of their estimated remaining useful life. The Tax Law advises how to calculate depreciation. The data used in our study are affected only by the Tax Law of 1973 (DPR 593) and not by the latest tax reform of 1986. Further research is needed in order to be able to measure the effects of the recent changes. Moreover, another major change should be incorporated: the implementation of the EEC directives. Currently, there is no sufficient data to conduct such a study. The rules which are mentioned here are related to the period (1976–1986) covered in our study.

Leasing

Italian law does not acknowledge the capitalization of lease agreements; thus, for statutory purposes, all leases are treated as operating leases. From 1 January 1984 it is necessary to disclose the total future lease obligations in excess of those already provided for in the balance sheet.

Research and Development

The Civil Code does not deal specifically with research and development costs, but requires that patents and trade marks be stated at cost and amortized over their remaining life, where definable, or within a five-year period. The fiscal legislation provides that not more than 50% of the research and development expenses incurred in the financial year are deductible from taxable income.

Inventories

The Civil Code established the general rule that raw materials and finished goods should be stated at the lower of production cost or purchase price and net realizable value.

The fiscal legislation, however, is more detailed and may be summarized as follows:

- Work-in-progress existing at the year-end is valued on the basis of average costs incurred in the tax period
- Raw materials and finished goods are valued at the lower of historic cost (determined on the LIFO method) and the "normal" cost of the last quarter of the relevant tax period. The "normal" cost is the cost incurred, in free market conditions, to get the goods to their present condition and location.

Capital and Reserves

Legal Reserves

An amount equivalent to at least 5% of the annual net profit is to be appropriated to a non-distributable legal reserve until the reserve is equivalent to 20% of the equity.

Group Financial Statements

The Civil Code does not provide for the preparation of consolidated financial statements or for the adoption of the equity method. It merely states that the carrying value of shareholdings is based on "prudent" judgment of the company directors. The CONSOB directions, however, are more specific and should be followed.

In addition the company's financial statements must include:

- A list of all shareholdings in controlled and associated companies, indicating their nominal value
- A copy of the most recent financial statements of each controlled company and a summary of the significant features of the most recent financial statements of each associated company.

CONSOB may require listed companies to file group financial statements whenever it is deemed necessary.

Foreign Currency Translation

The foreign currency issue is not discussed specifically by the Civil Code; however, consistent with its inherent logic, the rate of exchange existing at the balance sheet date should be used to calculate any unrealized losses. On the other hand, fiscal legislation requires that transactions in foreign currencies by translated into lira at the rates existing at the transaction date and that losses on exchange are to be accounted for only when they are realized. Thus any unrealized losses provided for in the financial statements are not recognized for tax purposes.

Taxation

A limited company is subject to:

- IRPEG, income tax on legal persons
- ILOR, local income tax which is deductible in calculating taxable income for IRPEG purposes.

As a rule, the taxable income of a company is based on the profit from operations as shown in the annual financial statements. However, various non-deductible items must be added back to arrive at taxable profits.

When an item of expense in the financial statements is disallowed by the fiscal authorities, because it should capitalized or deferred and subsequently amortized over a number of years, it is generally reinstated in the financial statements as a fixed asset or deferred charge, by crediting the "Tax Reserve". This adjustment is made in the year when agreement is reached with the fiscal authorities and is amortized in subsequent years.

Depreciation

The depreciation rates correspond generally to the estimated useful life of the asset and are applied to cost on a straight-line basis. Accelerated depreciation is normally allowed to a maximum of 15% of cost in each of the first three accounting years of use, thus providing a maximum aggregate accelerated depreciation equivalent to 45% of cost.

Price Level Changes

Although the purchasing power of the lira has declined in recent years, there is no legislation which requires businesses to recognize these effects in their financial statements. As described previously under valuation principles, recent legislation has provided a means of revaluing assets.

Retirement Benefits

There is a national social security fund to which all employers and employees contribute. In addition, companies should create a termination reserve (Fondo

trattamento fine rapporto), for employees by making an annual provision of approximately one-twelfth of the total salaries paid. Upon termination, employees are entitled to a deferred compensation payment out of the reserve, of one month's salary times the number of years employed.

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Footnotes

1. See, for example, Banca D'Italia, *Relazione dell'assemblea ordinaria dei partecipanti*, anni 1962–70.
2. See, for example, Banca D'Italia, *Ricerche quantitative e basi statistiche per la politica economica*, atti convegno Perugia 13–15 marzo 1986.
3. See the *Civil Code*, Libro 5 .
4. See, for example, Gray et al (1984), p.151.
5. See, for example, Oldham (1987).
6. See the *Civil Code*, art, 2425.
7. See *Principi Contabili Dottori Commercialisti.*
8. R & S, 1976–81–86, Milano, *Ricerche E Studi.*
9. See, for example, Mascra (1970) and Savona (1970).
10. See: Banca D'Italia, *Italian Credit Structures, Efficiency, Competition & Control.*
11. Although additional Balance-Sheet and Income Statement items might also be affected, they would not bias any results in a single direction, either upwards or downwards.
12. See: Banca D'Italia, *Italian Credit Structures, Efficiency, Competition & Control.*
13. See: Banca D'Italia, *Relazione dell'assemblea ordinaria dei partecipanti*, anni 1970–87.
14. See: Banca D'Italia, *Relazione dell'assemblea ordinaria dei partecipanti*, anni 1975–85.

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Geographic Area Disclosures and the Assessment of Foreign Investment Risk for Disclosure in Accounting Statement Notes

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Key words: CFAs; Experiment; Geographic segments; SFAS 14; Investment

Abstract: *An experiment was conducted to investigate the relevance of data on less aggregated geographic areas. Chartered Financial Analysts (CFAs), assigned to six different treatment groups, were presented with financial statement data, (including geographic area disclosures) and asked to assess the riskiness of investing in the hypothetical multinational corporation (MNC) depicted. Relevance was measured as the difference in risk assessment between groups receiving different levels of aggregated geographic area data. The results indicate that the level of aggregation can significantly affect financial statement users' risk assessments.*

Publicly held US multinational corporations (MNCs) are required by the Financial Accounting Standards Board's (FASB) Statement of Financial Accounting Standards (SFAS) No. 14[1] to include in the notes to financial statements information on their foreign operations. SFAS 14 requires firms to report certain items of information by geographic area. Management has the responsibility of deciding how individual countries should be grouped together to form reportable geographic areas. Although some guidance is provided by SFAS 14, so much discretion is left to management in determining reportable geographic areas that the degree of aggregation selected by many firms may not provide adequate information for financial statement users to assess the riskiness of a company's foreign operations. Claiming that the FASB requirements are inadequate, several researchers have called for more stringent requirements so that the presentation is made on a less aggregate basis.[2]

This study used an experimental framework to examine whether the level of aggregation of geographic area data is relevant in making investment decisions. The subjects, Certified Financial Analysts (CFAs), were asked to indicate the level of risk associated with an investment in common stock of a hypothetical multinational corporation. An across-persons design was employed wherein different groups

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evaluated the risk of different hypothetical MNCs. As the level of aggregation was different for each group, relevance was measured by changes in the risk assessments of the firms between the groups. The results show that the level of aggregation of geographic area does influence the risk assessment of financial statement users.

Development of the Research Problem

SFAS 14 requires firms to present data on foreign operations by significant geographic areas if (1) revenues generated from total foreign operations are 10% or more of consolidated revenues or (2) identifiable assets of total foreign operations are 10% or more of consolidated total assets. A geographic area is defined as significant if its revenues or identifiable assets are 10% or more of the related consolidated amounts.

Reportable geographic areas can be either individual countries or groups of countries. Determination of geographic area is left to management's discretion. Factors to be considered include proximity, economic affinity, similarities in business environment, and the interrelationship of the firm's operations in the various countries.[3] For each significant geographic area, firms must report revenue, operating profit, and identifiable assets.[4]

Emmanuel and Gray[5] suggest that under SFAS 14, a firm wishing to provide minimum disclosure could argue that its "Japanese, Korean and Philippine operations which separately meet the 10% revenue rule are in fact one geographic area, that is Asia". In their view, adequate disclosure of information by geographic area depends upon management's good intentions.

Studies by Arnold, Holder, and Mann[6] and Bavishi and Wyman[7] indicate that management has been reluctant to provide information on relatively disaggregated geographic area. Arnold, Holder, and Mann examined 10-K reports of 131 of the *Fortune* 500 firms with regard to geographic area disclosure. They found that only 17.6% of all disclosures were by country, 34.8% were at a continent or subcontinent level, and 12.8% were global in nature. "Other" was the geographic area used in 25.2% of all disclosures. Although each firm technically complied with the letter of SFAS No. 14, they may have violated its intent. The authors believe that the factors listed by the FASB for selecting appropriate geographic areas imply greater disaggregation than a single global category or continent. "Such data is important due to political (for example, expropriation) and economic (for example, currency exchange and translation) implications".[8] They recommend separate disclosure of each country in which 10% of total revenues is generated.

Bavishi and Wyman examined geographic area disclosures of 296 of the *Fortune* 500. Seventy-three percent of their sample firms used only one or two geographic areas (other than the United States). Of 17 firms in the pharmaceutical industry, 12 different classification schemes were used, including:

USA – Americas and Far East – Europe and Mideast and Africa

and

USA – Europe and Africa – Canada and Latin America – Other

Table 1. Number of significant geographic areas reported

Number of areas	Number of companies	Percentage (n = 120)	Cumulative percentage
1	30	25	25
2	50	41	66
3	26	22	88
4	13	11	99
5	1	1	100

The lack of cohesiveness in these areas led them to ask, "Where is the 'proximite, economic affinity, similarities in business environment' apparent in a classification, such as 'Europe/Mideast/Africa'?" They concluded that "the difficulty of assessing foreign risk of one company or comparing foreign risk between companies is apparent from the variety and vagueness of titles".[9]

These two studies used data gathered from annual reports for the year 1978. It is possible that in the intervening period of time companies have voluntarily decreased the level of aggregation in their geographic area disclosure and that over time the geographic areas defined by companies have become more cohesive. To examine this the annual reports of a sample of 120 companies reporting geographic area information in 1986 were examined to determine the number of areas reported (other than the USA) and the level of aggregation used for reporting purposes. Table 1 shows that 25% of sampled companies reported only one geographic area other than the USA generally labeled "Foreign". Another 41% reported only two areas, typically "Europe" and "Other", or "Eastern Hemisphere" and "Other Western Hemisphere". Only 12% reported more than three areas. General Motors, for example, reported on four areas: Canada, Europe, Latin America, and Other.

General Motors provides a good example of the different levels of aggregation used by companies for their geographic areas – country (Canada), continent (Europe), super continent (Latin America), and global (Other). Table 2 shows the frequency with which companies used these different levels of aggregation.

It can be seen that 73% of the companies sampled used a global category (Foreign or Other) to describe one of the geographic areas in which they had operations. This category represented 32.8% of all the geographic areas reported on.

Countries were aggregated at the hemisphere level (Eastern or Other Western) or the super continent level (e.g., Europe/Middle East/Africa, Latin America and Canada) by 32% of companies sampled. Of the 120 companies examined, only five did not use a global or super continent level of aggregation.

Table 2. Level of aggregation of significant geographic areas

Level of Aggregation	Number of companies	Percentage of companies
Global (Foreign, Other)	88	73%
Hemisphere, Super Continent	38	32%
Continent	69	58%
Country	31[a]	26%

[a] 26/31, Canada.

Countries were aggregated at a continent level (e.g., Europe, Africa, and South America) by 58% of companies. Only 26% of companies reported on individual countries, and of those, Canada was the individual country reported 84% of the time.

For the most part companies distinguish between the eastern and western hemispheres in defining geographic areas. Countries in the western hemisphere are generally reported in aggregate as "Other Western Hemisphere" or "Canada and Latin America", or decomposed into two areas "Canada" and "Latin America". More variety exists in the way the countries of the eastern hemisphere are reported. Some companies aggregate at the "Eastern Hemisphere" level, whereas others decompose this region into two or more areas. The ways in which the eastern hemisphere is decomposed include:

Two areas

Europe Asia/Africa/Australia
Europe Far East
Europe/Africa Pacific
Europe/Middle East/Africa Far East

Three areas

Europe Pacific Africa
Europe Africa/Middle East Asia/Pacific

Four areas

Europe Asia Africa Oceania

Still other companies aggregate countries across hemispheres to create geographic areas, such as:

Americas/Far East
Americas/Pacific
Latin America/Asia Pacific/Canada
Pacific/Canada

Three conclusions can be drawn from an examination of companies' geographic area disclosure. First, virtually all companies aggregate some countries at a super continent or higher level, and other than Canada, companies do not report on an individual country basis. Second, the vast majority of companies aggregate countries into three or fewer geographic areas for reporting purposes. Third, there is no standardisation in the manner in which US companies decompose the world for geographic area reporting purposes. Thus, the potential limitations in geographic area disclosure identified by previous researchers continue.

The highly aggregated geographic areas used by firms to divide the world hide differences in investment risk that exist between countries within those areas. The perceived risk of investing in the Philippines is likely to be far different from that for Australia, yet both are encompassed in a single geographic area such as Far East/Pacific. Even within a fairly homogenous continent, such as Europe, there is likely to be a difference in perceived risk between a country, such as the Netherlands and Yugoslavia.

Implicit in the conclusions drawn by previous researchers is the assumption that providing data on less aggregated geographic areas could increase the relevance of information to financial analysts and other financial statement users. This assumption is the basis for the research question addressed in this study:

Are data on less aggregated geographic areas more relevant than data on more highly aggregated geographic areas in assessing the riskiness of investing in a firm with foreign operations?

Before recommending a policy decision that firms should provide information on less aggregated areas, research is necessary to determine whether that data would be used. Two issues are considered jointly by this research question: (1) whether geographic area data are important in the investment decision process and (2) whether users can differentiate between relatively low risk and high risk areas in the world.

Theoretical Framework

A theoretical basis for the disclosure of geographic area information is found in the "fineness theorem" of information economics.[10] Mohr argues that the fineness theorem has direct applicability to segmental reporting, "since the provision of segmental data in conjunction with consolidated data represents an information system which is "finer" than the disclosure of consolidated data alone".[11] Although this argument was offered for segmental reporting by industry, the same argument can be made for geographic segment reporting. Mohr continues:

Furthermore, by viewing the incremental disclosure of segmental sales, earnings, or other data as successively "finer subpartitions" of the information set, a number of "fineness" comparisons are possible. And, in accord with the theoretical result, each of these comparisons would imply that the "finer" information system is at least as valuable to the decision maker as the reporting of consolidated data alone (or of a less detailed set of segmental data) [emphasis added].

Thus, disaggregation of geographic areas as currently reported by companies in the US would lead to a finer information set which would be at least as valuable to financial statement users as the less detailed set of information.

In portfolio theory, it is suggested that decision makers utilize the available information set to acquire a portfolio of investments with a utility maximizing risk/return relationship.[13] In this context, the disclosure of geographic area data on a less aggregated basis results in a finer information set which could lead to a revision in the decision maker's assessment of risk and/or return.

Prior Research

The relevance of geographic area disclosure has only recently become a topic of empirical research. Prodhan[14] examined the association between geographic segment

disclosure and systematic risk of stock returns for a group of companies listed on the London Stock Exchange. Using an interrupted time series analysis he found that geographic disclosures and systematic risk were related. These results imply that geographic segment disclosures have information content to market participants in UK.

Balakrishnan, Harris, and Sen[15] examined the relevance of geographic segment disclosures per SFAS 14 in predicting sales and earnings of US companies. Using both random walk and growth adjusted models, they found that geographic area disclosures can enhance the information set used to predict annual earnings. It should be noted, however, that theirs was not a true test of SFAS 14 disclosures. Rather than using the actual geographic areas reported, they used information provided in 10-Ks on significant properties and references in the annual report to specific countries to disaggregate the geographic areas actually reported to a country basis. The percent of total operations allocated to individual countries within a reported region was arbitrarily based upon the relative GNPs of countries referred to located in that region.

Doupnik and Rolfe[16] [DR] conducted a laboratory experiment to examine whether different levels of aggregation of geographical area affect subjects' assessment of the risk of investing in a US MNC. They asked student subjects to evaluate 27 cases which represented all combinations of three variables having three treatment levels. The treatment variables were three different geographic areas and the treatments involved disaggregating to a country level of disclosure. They found that for the most part disaggregating geographic areas from a continent level to a country level significantly affected subjects' risk assessments.

There are several limitations in the DR study. The internal validity of their experiment is subject to question due to the demand effect of a within person, repeated measures design. The subjects may have perceived the manipulation of treatment variables and provided the responses they felt the experimenters were looking for. The external validity is questionable due to the use of student subjects, who may or may not react as actual financial analysts, and due to the use of individual countries as significant geographic areas in building hypothetical MNCs in the case scenarios. As noted above, very few companies use single countries as reportable areas.

This study seeks to improve upon the methodology employed by DR by (1) using CFAs as subjects, (2) employing an across-persons experimental design, and (3) building cases using geographic areas at a level of aggregation commonly used by US MNCs to divide the world.

Methodology

An across-persons experimental approach was used to determine the impact level of aggregation of geographic area data has on financial analysts' assessments of investment risk. CFAs were randomly assigned to one of six different groups. Each group received a different experimental instrument depicting a hypothetical MNC with common background information. The only difference between each group

was in the level of aggregation of the geographic areas reported on in the notes to the financial statements.

Background Information

Subjects were given summary financial information on a hypothetical firm with no foreign operations (Domestic Corporation) whose stock was traded on the New York Stock Exchange. Summary financial statement data for the years 1982–1986 were provided. These data were constructed by taking average amounts for the *Fortune* 500 firms that had complete data on the COMPUSTAT tape. The subjects were told than an investment in the common stock of this firm was of moderate risk; on a scale of 1 (low) to 9 (high), the risk was assigned a rating of 5. This information was common to each of the cases for the six groups.

Experimental Task

Subjects were then provided information on a second hypothetical firm (Multinational Corporation) which was similar in all ways to Domestic Corporation other than the location of its operations. Fifty percent of Multinational's revenues, operating profit, and identifiable assets were located outside of the United States. The manner in which this 50% was reported varied from group to group. The subjects were asked to indicate the level of risk they associated with an investment in Multinational Corporation on the same nine point scale used for Domestic Corporation. They were told that risk was the possibility that the actual return from an investment would deviate from expected return, which could be caused by many factors, including the economy in general, competition, technological development, and government interference. A sample case is presented in Fig. 1.

Case #6

	Percentage of Total Located in Each Area		
	Revenues	Operating Profit	Identifiable Assets
United States	50%	50%	50%
Other Western Hemisphere	20%	20%	20%
Europe	20%	20%	20%
Middle East/ Africa	5%	5%	5%
Far East/ Pacific	5%	5%	5%
Total	100%	100%	100%

PLEASE INDICATE ON SCALE OF 1 (low) TO 9 (high):

(a) the level of risk you associate with an investment in the common stock of Multinational Corporation and
(b) the degree of confidence you place in your risk assessment made in (a).

Level of risk
low risk 1 2 3 4 5 6 7 8 9 high risk
Degree of confidence
low confidence 1 2 3 4 5 6 7 8 9 high confidence

Fig. 1. Sample Case

Since risk evaluation is an integral part of the investment decision process, differences in risk assessment among the groups served as an operational measure of the relevance of the level of aggregation of geographic area data. Six cases were developed to determine the impact the level of aggregation of geographic area data has on risk assessment.

Subjects were also asked to indicate the degree of confidence they placed in their risk assessment on a scale of 1 (low confidence) to 9 (high confidence). Information is defined as relevant if it has the capacity to change a decision or if it reduces the uncertainty surrounding a decision already made.[17] Differences in the degree of confidence among the groups were used as a second measure of the relevance of less aggregated geographic area data. Thus, the two dependent variables were risk assessment and decision confidence.

Cases

As can be seen in Fig. 2, the level of aggregation varied from three areas being reported in Case 1 to five areas in Cases 5 and 6. In each case 50% of revenues, operating profit, and identifiable assets were located in the United States. Of the remaining 50%, 20% was always located in the Western Hemisphere (other than in the United States) and 30% was always in the Eastern Hemisphere. Case 1 presents this information in the most aggregated fashion possible; simply stating that 20% of

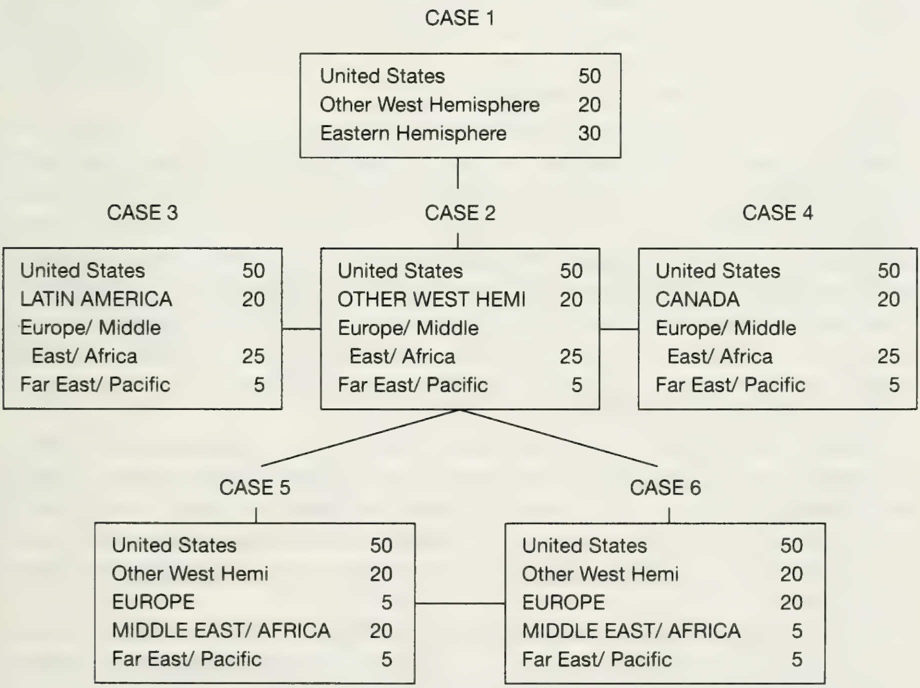

Fig. 2. Case treatments

operations were in "Other Western Hemisphere" and 30% were in the Eastern Hemisphere. Case 2 disaggregated the 30% of operations located in the Eastern Hemisphere into two components: 25% in "Europe/Middle East Africa" and 5% in "Far East/Pacific". These groupings were chosen because they are commonly used by US MNCs in their geographic area disclosures. Note that under SFAS 14, a US MNC with 25% of operations in Europe/Middle East/Africa and 5% in Far East/Pacific could choose to report on two separate geographic areas or could opt to combine those two areas into one for financial reporting purposes. This is true because SFAS 14 establishes 10% of total operations as the threshold for a separate geographic area. Thus, a single MNC could have defined its significant geographic areas either as in Case 1 or as in Case 2.

Although Case 2 provides geographic area data at a less aggregated level than Case 1, it is unclear whether any additional information is provided. Whether subjects would react differently to Case 2 than to Case 1 would depend upon their assumption of the percentage of Eastern Hemisphere operations located in "Europe/Middle East/Africa" and the percentage assumed to be in the Far East and Pacific region, and the relative risks perceived to be associated with operations in these two regions of the world.

The grouping "Other Western Hemisphere" contains very heterogeneous countries in terms of investment risk. Investment in Latin America is generally considered riskier than investment in Canada, yet it is very common for both to be grouped into the category "Other Western Hemisphere". To determine whether specifically identifying investment in Other Western Hemisphere as being located in the geographic areas "Canada" or "Latin America" had an impact on risk assessment, Cases 3 and 4 were developed. These cases are identical to Case 2 except for the location of investment in Other Western Hemisphere.

In Case 3 all of the Other Western Hemisphere operations were located in Latin America. It was expected that this would be viewed as more risky than the company in Case 4 where all Other Western Hemisphere operations were located in Canada. Moreover, because the geographic grouping "Other Western Hemisphere" could include Canada, subjects might base their risk assessment on the belief that some of the Other Western Hemisphere operations were located in Canada. Consequently it was expected that the risk assessment for Case 2 would be lower than that for Case 3 (Latin America). Yet because the grouping "Other Western Hemisphere" could also include Latin America, it was expected that the risk assessment for Case 2 would be higher than that for Case 4 (Canada).

Cases 5 and 6 were developed to investigate whether disaggregation of the geographic area "Europe/Middle East/Africa" used in Case 2 into two areas "Europe" and "Middle East/Africa" would have an impact on risk assessment. In Case 5, 20% of operations were reported as being located in "Middle East/Africa" and 5% in Europe, and in Case 6, 20% of operations were located in Europe and 5% in "Middle East/Africa".

It was expected that the company depicted in Case 5 would be viewed as more risky than the company in Case 6 as the Middle East and Africa are generally considered to be more risky than Europe. It was also expected that the company in Case 5 would be perceived as more risky than the company in Case 2. When given

information that 25% of operations was located in "Europe/Middle East/Africa", it was anticipated that subjects could assume that more than 5% of operations was located in Europe. Thus, when 20% of operations was reported in "Middle East/Africa" with only 5% in Europe subjects might consider this case to be more risky. No *a priori* expectations could be developed for a comparison of Cases 2 and 6. Whether Case 2 could be considered more or less risky than Case 6 would depend upon whether subjects assumed that of the 25% located in "Europe/Middle East/Africa", more than 5% or less than 5% of operations were located in "Middle East/Africa".

Hypotheses

The above discussion leads to the following hypotheses related to risk assessment tested in this study:

Null Hypotheses	Alternative Hypothesis
Ho1: $R(1) = R(2)$	Ha1: $R(1) \neq R(2)$
Ho2: $R(3) = R(4)$	Ha2: $R(3) > R(4)$
Ho3: $R(2) = R(3)$	Ha3: $R(2) < R(3)$
Ho4: $R(2) = R(4)$	Ha4: $R(2) > R(4)$
Ho5: $R(5) = R(6)$	Ha5: $R(5) > R(6)$
Ho6: $R(2) = R(5)$	Ha6: $R(2) < R(5)$
Ho7: $R(2) = R(6)$	Ha7: $R(2) \neq R(6)$

where R = subject's mean risk assessment

1–6 = Cases 1–6

A second set of hypotheses was developed for the decision confidence variable. If less aggregated geographic area data provide relevant information for assessing risk, then the subjects' confidence with regard to their risk assessments should increase as data become increasingly less aggregated. Specifically, confidence should be lowest for that case which provides information at the most aggregated level (Case 1) and confidence should be greatest for those cases which provide information at the least aggregated level (Cases 5 and 6). The null hypothesis tested with regard to decision confidence was:

Ho8: There is no difference in the degree of confidence across cases.

The alternative was:

Ha8: The degree of confidence where five areas are reported (Cases 5 and 6) is greater than where four areas are reported (Cases 2, 3, and 4) which in turn is greater than where three areas are reported (Case 1).

Symbolically:

Ho8: $C(1) = C(2, 3, 4) = C(5, 6)$

Ha8: $C(5, 6) > C(2, 3, 4) > C(1)$

where C = subjects' mean confidence level

1–6 = Cases 1–6

Table 3. Profile of respondents

Age	20–29	30–39	40–49	50–59	Over 60
%	4.8%	27.4%	31.5%	29.0%	7.3%
Education	No Degree	Bachelor's	Master's	Law	Doctorate
%	0.0%	23.4%	72.6%	2.4%	1.6%
Experience	0–5	6–10	11–15	16–20	Over 20
%	4.0%	17.7%	18.5%	22.6%	37.1%
Type of firm	Investment	Insurance	Bank	Mfg	Other
%	66.1%	12.9%	17.7%	0.8%	2.4%
Percent of time spent on MNCs	0–10	11–20	21–40	40–60	Over 60
%	21.0%	25.8%	26.6%	18.5%	8.1%

Subjects

A random sample of 500 members of the Institute of Chartered Financial Analysts was selected for contact by mail. CFAs represent an important group of financial statement users as they routinely assist investors in the evaluation of potential investments. Subjects were randomly assigned to each of the six treatments. Twenty-eight mailed instruments were undeliverable, reducing the contact pool to 472 CFAs. One hundred twenty-four usable responses were received, yielding a response rate of 26.3%.

To develop a profile of the respondents in this study subjects were asked to provide certain demographic information after completing the research task. A summary of this information is presented in Table 3. That table shows that the majority of respondents (a) were highly educated (77% had a master's degree or higher), (b) had at least 10 years of experience as a financial analyst (60% had 16 years or more), (c) were employed by investment firms (66%), and (d) spent at least 20% of their time dealing with MNCs (53%).

Subjects were also asked to indicate the importance attached to "financial statements" and "notes to financial statements" in making investment decisions on a scale of 1 (not important) to 9 (very important). The responses to these questions are

Table 4. Perceived importance of financial statements and notes to financial statements in making investment decisions

Financial statements									
	not important								very important
	1	2	3	4	5	6	7	8	9
%	0.0%	0.0%	3.2%	3.2%	1.6%	4.0%	17.7%	26.6%	43.5%
Notes to financial statements									
	not important								very important
	1	2	3	4	5	6	7	8	9
%	0.0%	1.6%	3.2%	0.8%	3.2%	3.2%	15.3%	23.4%	49.2%

Table 5. Summary statistics on risk assessments by case

Case	N	Mean risk assessment	Standard deviation
1	18	6.33	0.84
2	26	5.73	1.37
3	21	6.76	1.18
4	22	4.64	1.22
5	19	6.84	0.83
6	18	5.00	0.91

shown in Table 4. The vast majority of respondents considered both financial statements and the notes thereto to be important in making investment decisions. Over 85% rated both sources of information at 7 or higher.

This demographic information indicates that the majority of respondents in this study were highly experienced users of financial statements accustomed to dealing with MNCs in making investment decisions. Thus, the experimental task was appropriate for this group of subjects.

Analysis and Results

Analysis of variance was used to test for an overall difference in the mean risk assessments across Cases 1–6. The hypothesis of no difference was rejected at the .0001 level. The specific research hypotheses discussed above were then tested by making pairwise comparisons between cases. The experimentwise error rate for multiple comparisons was controlled using a procedure suggested by Tukey.[18]

Summary statistics on risk assessments by case are presented in Table 5. Not surprisingly, that table shows that Case 5 (20% of operations in Middle East/Africa) was perceived as the most risky by CFAs, followed by Case 3 (20% of operations in Latin America). The case in which 20% of operations were located in Canada was rated least risky (Case 4), followed by Case 6 (20% of operations in Europe). The cases providing the least amount of detail (Cases 1 and 2) fell in the middle in terms of mean risk assessment. It is interesting to note that except for Case 4 (20% in Canada) the CFAs, on average, perceived each of the MNCs depicted to be more

Table 6. Tests of hypotheses

Hypothesis	Case Comparison	Difference between means	Significance
1	1–2	0.60	ns
2	3–4	2.13	**
3	2–3	–1.03	*
4	2–4	1.09	**
5	5–6	1.84	**
6	2–5	–1.11	*
7	2–6	0.73	ns

* significant at 0.05 level; ** significant at 0.01 level; ns, not significant at 0.05 level

risky than the Domestic Company. (Recall that the subjects were instructed to assume that Domestic Company had a risk rating of 5 on a nine-point scale).

Results of the risk hypothesis testing are reported in Table 6. That table shows that for each of the directional hypotheses (Ha2–Ha6) the sign of the difference between means was as expected and that each of these alternative hypotheses was supported at the 0.05 level or better. Neither Ho1 nor Ho7, for which no directional alternatives were developed, could be rejected at the 0.05 level. As expected the strongest results were obtained for the comparison of Cases 3 and 4 (Latin America vs. Canada) and the comparison of Cases 5 and 6 (Middle East/Africa vs. Europe).

The inability to reject Ho1 and Ho7 indicates that disaggregation of reported geographic areas, in and of itself, does not necessarily mean that relevant information has been provided. Examining the comparison between Cases 1 and 2 more closely, the inability to reject Ho1 could be explained in three ways. The first is that subjects may view the areas "Europe/Middle East/Africa" and "Far East/Pacific" as being equally risky for foreign direct investment. The second explanation is that those subjects responding to Case 1 may have implicitly assumed that if 30% of operations are in the eastern hemisphere, then about 25% would be in Europe/Middle East/Africa and 5% in Far East/Pacific. A third possible explanation is that the less aggregated areas "Europe/Middle East/Africa" and "Far East/Pacific" are themselves highly aggregated areas which provided no additional information for assessing investment risk. Perhaps the subjects implicitly combined these two areas and made their risk assessment thinking in terms of 30% of operations located in the eastern hemisphere.

These results imply that aggregation of geographic areas reduces information content only if the areas being aggregated are perceived to have different risk profiles. The results also imply that disaggregation of geographic areas provides relevant information only if areas of different risk are shown separately.

Degree of Confidence

Summary statistics on degree of confidence by case are presented in Table 7. Although in general mean confidence increased as the number of reported areas increased, the null hypothesis of no difference in degree of confidence across cases could not be rejected (P = 0.7529). Therefore, subsequent pairwise comparisons to test the confidence hypotheses were not made.

The small differences in confidence across cases could be explained in at least two ways. One possibility is that although geographic areas were less aggregated in the higher number cases, countries were still aggregated at the continent level or higher (except for Case 4 - Canada) and subjects still felt a great deal of uncertainty in their risk assessments. For example, knowing in Case 6 that 20% of Eastern Hemisphere operations were in Europe caused subjects to rate that hypothetical MNC as less risky than the subjects rated the hypothetical MNC in Case 1. However, not knowing in which European countries operations were located caused respondents to Case 6 not to be significantly more confident in their risk assessment than the respondents to Case 1. Although it is possible that further disaggregation of geographic areas to a country level would have caused significant differences in confidence to

Table 7. Summary statistics on confidence by case

Case	N	Mean confidence	Standard deviation
Three areas reported			
Case 1	18	4.55	1.72
Four areas reported			
Case 2	26	4.88	1.56
Case 3	21	4.57	1.72
Case 4	22	5.13	1.28
Five areas reported			
Case 5	19	5.00	1.67
Case 6	18	5.11	1.49

arise, we felt that it was important to use areas reported by companies at the levels of aggregation actually used.

Another possible explanation for the small differences in confidence between cases relates to the realism of the experimental task. The subjects were asked to make risk assessments using only a subset of the actual information that they would normally use in their investment analysis. Perhaps the relatively low confidence placed in risk assessments across all cases and the small differences across cases was a result of the subjects being forced to make decisions without being allowed to make a more complete data search that might have increased their confidence.

Summary and Conclusion

The results of this study indicate that the level of aggregation of geographic areas can be relevant to financial analysts in assessing the risk of investing in a company with foreign operations. This study has shown that decomposing a hemisphere level of aggregation (Other Western Hemisphere) into two components can significantly affect risk assessments, and that decomposing a super continent (Europe/Middle East/Africa) into two components can significantly affect risk assessments at least when a surprise is involved. These results are consistent with those of prior research.

The policy implication from the results of this study is that perhaps firms should be required to provide disclosure on less aggregated geographic areas. This suggestion raises the need to develop criteria for when and how to disaggregate. The two relevant dimensions are: (1) materiality and (2) differential investment risk. The first dimension relates to whether disaggregation of geographic information makes a difference in investors' decisions. Because limited activities in high risk areas should not have much impact on overall investment risk, those operations probably need not be disaggregated in the financial statements. In contrast, relatively large investments in high risk areas do make a difference in risk assessment. For example, in this study, subjects perceived the situation where 20% of operations were in the Middle East/Africa region as the most risky scenario. Further research needs to be conducted to

determine at what level investment becomes material enough to affect investment decisions.

Disaggregation by itself does not automatically provide useful information. In this study, the disaggregation of the Eastern hemisphere category into "Europe/ Middle East/Africa" and "Far East/Pacific" did not significantly affect the subjects' perception of risk. Possibly this was because of the amount of variability that exists in each of the categories. The group "Europe/Middle East/Africa" contains very low risk countries such as Switzerland and the Netherlands and also high risk countries such as Lebanon and Libya. As these are precisely the type of groupings that are used by many US MNCs, the FASB should consider mandating further disclosure.

A possible way to avoid this problem is by further disaggregating geographic areas into groups that better reflect differences in investment risk. One obvious was to disaggregate the grouping "Europe/Middle East/Africa" would be to divide it into two groups: "Europe" and "Middle East/Africa". On the other hand, simply grouping operations by continents can also mask risk differences. For example, although Latin America is generally perceived as a risky location for foreign direct investment, some countries such as Costa Rica and Ecuador are significantly less risky than others such as Peru and El Salvador. If a US MNC is investing in the lower risk countries within a geographic area, it would be advantageous to disclose that face. Disclosure could result in financial statement user perceiving the firm as less risky, perhaps resulting in higher stock prices and a lower cost of capital. Further research is needed to determine how these differences in country risk should be reflected in geographic area disclosures.

Footnotes

1. Financial Accounting Standards Board, "Financial Reporting for Segments of a Business Enterprise." *Statement of Financial Accounting Standards No. 14*. Stamford, CT: FASB, 1976.
2. See, for example, J. Arnold, W. Holder, and M. Mann, "International Reporting Aspects of Segment Disclosure." *The International Journal of Accounting*, Fall 1980, 125–135 and V. Bavishi and H. Wyman, "Foreign Operations Disclosure by US Based Multinational Corporations: Are They Adequate?"; *The International Journal of Accounting*, Fall 1980, 153–168.
3. op. cit., paragraph 34.
4. International Accounting Standards 14 also recommends that firms report sales or other operating revenues, segment result, and segment assets employed by geographic area. However, unlike SFAS 14, IAS 14 does not provide guidance as to how geographic segments should be determined or what constitutes a "significant" segment. International Accounting Standards Committee, "Reporting Financial Information by Segment." *International Accounting Standard 14*. London: IASC, 1981.
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9. Bavishi and Wyman, p.159.
10. See, for example, J. Marschak and R. Radner, *Economic Theory of Teams*. New Haven, CT: Yale University Press, 1971.
11. R. Mohr, "The Segmental Reporting Issue: A Review of Empirical Research." *Journal of Accounting Literature*, 1983, 41.
12. ibid.

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16. T. Doupnik, and R. Rolfe, "The Relevance of Level of Aggregation of Geographic Area Data in the Assessment of Foreign Investment Risk." *Advances in Accounting*, 1989, 51–65.
17. Financial Accounting Standard Board, "Qualitative Characteristics of Accounting Information." *Statement of Financial Accounting Concepts No. 2*, Stamford CT: FASB, 1980.
18. See, SAS Institute Inc, *SAS User's Guide: Statistics*. Cary, NC: SAS, 1985, 473.

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Accounting Implications of the Perception of Professional Ethics: A Comparative Analysis of American and New Zealand Students

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Key words: Ethics; International; Professional; Questionnaire; Auditor responsibilities

Abstract: *In an era in which increased emphasis is being placed on moving toward internationalizing accounting and auditing standards, increased emphasis will have to be placed on moving toward a common perception of professional ethics. One of the problems in this area relates to educating college students and whether or not their perceptions of ethical behavior can be modified.*

This paper presents the results of a study that compared a set of ethical responses of American and New Zealand college students with each other. The research question asked: Given individuals from different cultures, do their perceptions of ethical behavior converge through education? Several hypotheses were tested.

The results of the hypotheses testing demonstrate a change in ethics perception after exposure to professional ethics in the college curriculum. This provides evidence that the need to bring about similar behavior regarding professional ethics in the international business environment may be accomplished through the formal education process, at least where the cultures have similar backgrounds such as those of the United States and New Zealand.

The relationships between different cultures and multinational enterprises have received increased attention since the enactment of the Foreign Corrupt Practices Act in the United States in 1977. Although this Act was aimed at American business, its impact has been felt throughout the world because of the legal need for American businesses to change the way in which they deal with businesses and governments of other countries.

Only in recent years has higher education addressed the problems of professional ethics as related to international trade. While it would be be unrealistic to expect every culture to move toward the same moral and ethical standards, there is much to

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be said for exposing the morals and ethics of one culture to its trading partners. An evaluation of the deferences between cultures should provide benefits to exporting/importing businesses of both groups.

This paper presents the results of a study of American and New Zealand college students' perceptions of professional ethics as related to accounting issues. Comparisons of ethics perceptions were made between the groups stratified by those who had been exposed to ethics in the classroom versus those who had no ethics exposure. Exposure to ethics was considered to be either a course in ethics or a formal ethics segment in another course.

Prior to determining a standard for appropriate business conduct between individuals of different cultures, it is important to know what differences exist in the ethical and moral thinking of the cultures. If executives (college students) are exposed to the ethics and ethical problems early in their business education, they should be better prepared to cope with, and respect, the moral and ethical standards of others. By studying and evaluating the ethics perceptions of like groups (college students), information should be provided that will help different cultures evaluate how they should deal with each other.

Current Perspective

International considerations of ethics and ethical behavior have been topics of interest to the accounting profession in recent months. Several multinational public accounting firms are considering the implementation of ethics committees that will assist with ethical problems, both domestic and international.[1] Various American colleges that have international business programs are attempting to expose their students to ethical concepts through courses in international trade, modules in existing courses, and special seminars and presentations. However, exposing only those students studying international business to the ethics of different countries is insufficient in today's environment. Many of today's business graduates will work with organizations that have international dealings and many of today's organizations will become involved in international transactions.

Kruckeberg, in arguing for an international code of ethics, stated that large corporations are particularly harsh when dealing with Third World Countries.[2] According to his research, multinational corporations have been accused (he avoids stating that they are guilty) of every conceivable transgression, including the extension of colonialism in some countries, exploitation of cheap labor in others, and practically stealing natural resources in all countries.

Others defend the activities of multinational corporations in Third World Countries by listing the many benefits that are provided in exchange for cheap labor and natural resources that are priced below world market prices. According to Micou, at least four benefits are provided by these large multinationals. They are: (1) development of human resources through training and employment experience, (2) transfer of technology, (3) increased standards of living (economic), and (4) increased quality of life through education, imporved health care and nutrition, and better

housing.[3] However, in many cases the improvements are only in the eyes of the developed country, not the developing country. Imposing our standard of living on another culture is not necessarily an ethical action.

From public reports it is obvious that pressures exist for international corporations to commit unethical acts. However, the extent of unethical conduct is uncertain. Touche Ross surveyed more than one thousand people – corporate executives, college deans, and members of Congress – to learn of their opinions of business ethics in the United States.[4] This study found that 97% of the respondents believe businesses operate ethically, including 15% of the respondents who believe businesses are "highly" ethical. Another survey of a cross-section of individuals showed consistent findings. The consensus of these respondents was "that corporate ethics are on a higher plane than ever before".[5]

Many business critics, however, are disappointed with the present ethical climate of business.[6] One study by an executive search firm confirms these suspicions. Some of the survey respondents (including business executives, middle managers, and other interested business professionals) believe that businesses as a whole are ethical, but that individuals within business do not perform with the same degree of ethical responsibility. This study revealed that 56% of the respondents believe that people they know would bend the rules to get ahead and 51% of them stated that they trust people less today than they did a few years ago.[7] This study also noted that 25% of the respondents believe ethical behavior does not pay and that it impedes success.

Influence of Multinational Organizations

Multinational organizations are numerous and powerful throughout the world. With influence in every area of society these organizations provide a vehicle for spreading sound ethical behavior. Previous studies have determined that ethical behavior can be influenced by those in power.[8] If executives show a concern for fairness and sound morals, this permeates the entire organization.

Emphasizing this fact, the Treadway Commission noted that, "the tone set by top management ... is the most important factor contributing to the integrity of the financial reporting process".[9] The Commission also recommends that companies develop and enforce written codes of conduct. They believe these codes can foster a strong ethical climate which will open channels of communication within the organization. A stronger awareness of ethical behavior and open communication channels can help protect against fraudulent financial reporting.

While managers can set the tone for sound ethical behavior, they cannot monitor every business action as to its ethical consequences. Even where there is strong adherence to a code of ethics, the pressures to perform sometimes cause ethical breakdowns. To meet sales quotas the actual sales figures may be adjusted; costs may be incorrectly allocated to stay within the budget; and foreign currency adjustments may be manipulated; the possibilities are many and the means often creative. Division managers, and others in positions of responsibility may assume they can do anything to achieve the desired results as long as they are not caught.

And, if they are caught and not reprimanded, their logic and behavior are reinforced. If management only gives lipservice to ethics and codes of conduct, without formal policies and policing, the codes will not be effective. A formal review and evaluation of ethical policies are necessary for ethical behavior to penetrate all areas of the organization.

Changing Ethical Behavior

A problem directly related to changing the ethical behavior of international business is the means of affecting the change. Short of legal means, it is generally agreed that large multinational organizations can be influenced to conduct their activities in an acceptable way through their executives. Proper training of the executives should begin during college and this study focuses on understanding ethics perceptions of college students and how education may generate compatible behavior for international business.

While no one questions that education can influence human behavior, many question whether there is much influence over ethical matters. The literature is generally negative on the effects of formal ethics training. According to Lane et al. " ... there is little empirical evidence to suggest that ethical behavior and decision-making are enhanced through ethical education".[10] F. G. Rohatyn voices the opinion of many sociologists when he states his belief that ethics must be taught and reinforced in a person's early development years. He doubts that it can be taught in college.[11] Short-run awareness, yes: permanent changes in ethical behavior, no; these results seem to be the consensus of researchers in the area of business ethics.

Many of the opinions related to the development of business ethics are influenced by the elaborate study undertaken by Ryan and Thomson in the early 1970s. Their study provided evidence that the greatest impact on the ethical behavior of individuals occurs between the ages of 5 and 9.[12] They also concluded that the greatest impact comes from the family environment followed by the influence of religious activities (a distant second). Close behind the church, in third place, was primary and secondary schooling. Mass media and peers were rated as fourth and fifth, respectively. Their study made no mention of the influence of higher education.

In his recommendations for improving ethical behavior. Rohatyn states that education is a necessary part of ethical behavior problem solving if coupled with early childhood ethics training. Loeb reinforces this by stating that accounting students must receive ethics education and training if they are to be able to respond properly to ethical dilemmas and deal with the dynamic nature of ethics in the business environment.[13] These stances follow the general work of Kohlberg and others who advocate that a person may move through the stages of ethical development by "engaging in challenging moral decision making".[14] This development process may take place during college courses, formal training sessions employers, and professional development courses. The important consideration is that the training continue throughout one's lifetime. Studies show that codes of ethics are more likely to affect employee behavior if they are part of an on-going program at all levels within the

organization.[15] From employment to termination, ethics should be periodically included in each employee's training program.

For most managerial levels, all accountants, and all others whose activities interface with the external environment, ethics training should be high on the list of topics frequently covered. Training sessions on ethics should include case studies, journal articles, and open discussion. The case studies should be based on events that have happened, or could happen, within the present organization. For those involved in international operations, these studies should include relevant ethical problems about international trade.

Research Rationale and Hypotheses

The ethical behavior related to international operations cannot be improved until the ethical behavior of an organization's employees is improved. Accountants who are members of the international segment of a business need to be exposed to the anticipated ethical behavior of those they deal with on the international level. Our study addresses whether or not the expected ethical behavior of individuals (college students) in typical American and New Zealand business programs is similar.

A few studies have dealt with the development of ethical behavior of accounting students as they progress through their college experience.[16] However, no studies have attempted to evaluate these types of ethical perceptions across international lines. In this study, research was performed to evaluate changes in students' ethical behavior during their college years and to compare the changes between the two countries. As evident from the section of this paper dealing with current perceptions of business ethics, additional research needs to be undertaken to further evaluate the changes and developments taking place in the area of ethics education and training, as related to business. Business and accounting programs are adding ethics; courses, companies are including ethics topics in their training programs, and ethics consultants are constantly in demand by organizations which need help in this area. Yet, with all of these activities taking place, not much emphasis is being placed on the need for compatible codes of ethics between countries who are trading partners.

To assist in filling the void of research related to international ethics education and training, this study addresses the notion that the perception of ethical behavior and the related education process must be understood between international cultures before codes of ethical conduct for international relations can be established for multinational organizations. The first hypothesis considers the fact that ethical behavior and the perceptions of business ethics in different part of the world are different for college students who have not been exposed to business ethics. This hypothesis, stated in its null form is:

Ho_1: There is no difference in the perceptions of ethical behavior between American and New Zealand students who have not been exposed to business ethics in the classroom.

Before attempts can be made to change the ethical perceptions of a culture, it is important to see how one culture is similar to, or different from, another culture. The American and New Zealand cultures were selected because they have similar,

yet unique historical backgrounds. While the American culture is British based and heavily influenced by other Western European cultures, the New Zealand culture is predominately British with a minimum of outside influence.

The second hypothesis considers the fact that college education in different parts of the world does make a difference in the perceptions of ethical behavior. With the increased emphasis on a world economy, it is anticipated that the education experience should impart similar behavioral perspectives regarding ethical matters, particularly in countries with similar cultural backgrounds. This hypothesis, stated in its null form is:

Ho_2: There is no difference in the perceptions of ethical behavior between American and New Zealand college students who have been exposed to ethics in the classroom.

This hypothesis compares the perceptions of college students in business in the United States and New Zealand but it does not address whether the changes were caused by ethics courses, modules of ethics in other courses, or through cases and practice sets. The situations used to compare the different perceptions of ethical behavior are based on various parts of the American Institute of Certified Public Accountants, the Institute of Internal Auditors, and the National Association of Accountants standards of professional conduct.

Methodology

Questionnaire

A questionnaire was developed using two vignettes titled *Tom Waterman and Paul Tate* from the National Association of Accountants' ethics video tape. Summaries of these scenarios are presented in the Appendix. The questionnaire was reviewed by several of our colleagues for effectiveness in achieving our goal of presenting "gray" areas. Next, it was taken by a group of students, several of whom were interviewed to obtain their understanding of the questions. A final draft of the questionnaire was then prepared.

Before viewing the videos, students were asked to react to a series of statements concerning ethical/unethical behavior. The statements related to points raised in the videos. However, the students were unaware of this because we did not want their perceptions influenced by the video presentation.

A student could agree with, disagree with, or state that he/she was undecided as to the proper behavior in each situation. The statements addressed "gray" situations, i.e., situations which do not fit neatly into the do's and don't's of formal codes of ethics. Such statements as, "Forcing quarterly sales figures to meet a budget is acceptable if no difference is expected in annual sales," were designed to test the respondents' feel for impairment of objectivity. Ethical behavior begins to breakdown at the point where a professional loses his/her objectivity or subordinates his/her judgement to another.

After completing this part of the questionnaire, the students were shown the *Tom Waterman* video. They then responded to four statements related directly to the

Table 1. Questionnaire

The following statements were evaluated by the participants before they viewed the videos:

Case from Which Statement is Drawn	*Statement*	
Paul Tate	(1)	Questionable adjustments to financial records that are used internally are acceptable.
Paul Tate	(2)	Questionable adjustments to financial records that are used externally are unacceptable.
Paul Tate	(3)	When business conflicts arise which involve ethical issues, loyalty to a friend should outweigh loyalty to your own company.
Paul Tate	(4)	Activities which improve a company's short-term performance without hindering long-term performance are not really ethical issues.
Paul Tate	(5)	Forcing quarterly sales figures to meet a budget is acceptable if no difference is expected in annual sales.
Paul Tate	(6)	Forcing quarterly sales figures to meet a budget (thus insuring a quarterly bonus) is acceptable if no difference is expected in annual sales.
Tom Waterman	(7)	If corporate management sets policies and your superior is part of corporate management, you should do what he/she says even if it violates company policies.
Tom Waterman	(8)	If you are a third tier manager and your superior violates company policy but tells you his/her superior said it was OK, you should follow the orders of your superior and not go to top management.
Tom Waterman	(9)	Company policies/procedures should always be followed unless they are illegal.
Tom Waterman	(10)	A person reviewing and approving expense reports has more responsibility for following company policy than someone merely recording the transactions in the accounting records.
Tom Waterman	(11)	It is wrong for an employee to be "tested" in matters related to ethics.
Tom Waterman	(12)	The importance of a division (one making most of the profits) to a company allows taking liberties with company policy within that division.
Tom Waterman	(13)	The threat of being labeled "whistleblower" in matters which may be wrong, but are immaterial in dollar terms, allows a person to look the other way.
The following statements were evaluated after the participants viewed the videos:		
Tom Waterman	(14)	Because Tom Waterman's job is in jeopardy, it is acceptable for him to give in to Howard, his boss.
Tom Waterman	(15)	Because Joe (Howard's boss) approved the questionable expense reimbursements, Tom is off the hook.
Tom Waterman	(16)	Tom has a responsibility to report the questionable expense reimbursement to someone above Joe.
Tom Waterman	(17)	It is alright to let Howard's wife do corporate typing as a special favor to Howard because he is a valued employee.
Paul Tate	(18)	What should Paul Tate do? (a) Juggle the sales figures? (b) Send out a customer's order early and record the sale? (c) Extend credit to his friend so that the sales quota can be met? (d) Do nothing to either the books or the credit rating of his friend?

Table 2. Responses of US and New Zealand students

	Hypothesis 1: Perceptions of students lacking formal ethics instruction			Hypothesis 2: Perceptions of students with formal ethics instruction		
	US %	NZ %	Significance	US %	NZ %	Significance
1. A	20.3	35.0	**.002**	17.4	29.9	.213
U	20.3	20.5		19.5	11.3	
D	59.4	44.5		63.1	58.8	
2. A	55.9	68.4	**.040**	63.8	70.4	.253
U	22.0	12.4		10.7	10.2	
D	22.1	19.2		25.5	19.4	
3. A	02.5	08.1	**.077**	05.4	13.4	**.012**
U	27.7	30.0		18.8	24.7	
D	69.8	61.9		75.8	61.9	
4. A	35.3	48.7	**.005**	30.2	37.4	.280
U	26.0	25.3		24.2	22.2	
D	38.7	26.0		45.6	40.4	
5. A	24.4	22.8	.523	14.1	19.4	.727
U	26.0	23.8		20.1	10.2	
D	49.6	53.4		65.8	70.4	
6. A	18.5	20.9	.710	12.8	18.4	.394
U	30.2	23.8		12.7	11.2	
D	51.3	55.3		74.5	70.4	
7. A	13.4	07.1	**.011**	06.7	06.2	.471
U	20.2	14.9		14.8	11.3	
D	66.4	78.0		78.5	82.5	
8. A	11.8	16.0	.795	08.1	11.3	.968
U	32.8	24.8		27.5	22.7	
D	55.4	59.2		64.4	66.0	
9. A	72.3	61.7	**.021**	62.4	53.6	.133
U	13.4	12.1		16.8	17.5	
D	14.3	26.2		20.8	28.9	
10. A	33.6	38.9	.496	26.9	34.0	.294
U	15.1	11.8		10.7	09.3	
D	51.3	49.3		62.4	56.7	
11. A	21.9	19.9	.455	23.5	21.9	.235
U	37.8	35.6		28.9	20.8	
D	40.3	44.5		47.6	57.3	
12. A	11.9	11.8	**.020**	05.4	06.2	**.059**
U	40.7	26.1		30.9	17.5	
D	47.4	62.1		63.7	76.3	
13. A	36.4	16.0	**.001**	16.1	20.4	.278
U	24.6	31.8		18.1	20.4	
D	39.0	51.2		65.8	59.2	
14. A	10.1	05.7	.195	08.1	07.1	.428
U	10.9	10.3		06.7	04.0	
D	79.0	84.0		85.2	88.9	

Table 2. continued

Hypothesis 1: Perceptions of students lacking formal ethics instruction				Hypothesis 2: Perceptions of students with formal ethics instruction		
	US %	NZ %	Significance	US %	NZ %	Significance
15. A	10.9	13.9	.908	12.1	08.1	.793
U	16.0	11.4		10.7	14.1	
D	73.1	74.7		77.2	77.8	
16. A	80.7	88.5	**.046**	87.9	86.7	.817
U	16.0	07.9		06.0	08.2	
D	03.3	03.6		06.1	05.1	
17. A	03.4	04.3	.567	02.7	04.0	.718
U	09.2	10.4		08.0	08.1	
D	87.4	85.3		89.3	87.9	
18. (a)	02.5	03.7	.712	00.0	01.0	.561
(b)	09.3	12.2		07.4	13.4	
(c)	31.9	23.3		36.2	21.7	
(d)	56.3	60.8		56.4	63.9	

A, = Agree; U, Undecided; D, Disagree.
Note: Where the fitures are shown in bold type it indicates that the null hypothesis can be rejected at a 90% confidence level.

Waterman video. Next, the students were shown the *Paul Tate* vignette. At the point Paul is concluding the discussion of his options with his doctor, we paused the video and asked them to decide what Paul should do. In all, eighteen statements were used to test each of our hypotheses (see Table 1 for a complete listing of the statements).

Respondents

Four categories of respondents were surveyed: (1) American business students who had not been exposed to ethics education, (2) New Zealand business students who had not been exposed to ethics education, (3) American business students who had been exposed to ethics education, and (4) New Zealand business students who had been exposed to ethics education. The students were selected from randomly picked accounting classes. The sample consisted of 650 respondents: 119 Americans and 283 New Zealanders lacking ethics exposure; and 149 Americans and 99 New Zealanders who had ethics exposure.

Test Methods

Because of the ordinal nature of the respondent data, nonparametric statistics were employed to test the statements of each hypotheses. An alpha of 0.10 was used as the rejection threshold. A Kruskal–Wallis one-way analysis of variance was performed on each statement. This test compares the responses of the groups using a weighted average. Because the responses (agree, disagree, and undecided) are given different

weightings, the weighted averages of the groups can be compared to determine whether they represent actual differences in group responses or chance variation. This test adjusts for the size of each statement response category as compared to the total number of responses.[17] The results of the Kruskal–Wallis tests were consistent with chi-square and the parametric analysis of variance tests which we performed as supporting tests.

Test Results

The first hypothesis stated that we expected no difference between the perceptions of ethical behavior of American and New Zealand college students who have not been exposed to professional ethics. This hypothesis was rejected with 9 of 18 individual statements having an alpha of 0.10 or less. The null hypothesis was rejected at an alpha of 0.10 or less for statements 1, 2, 3, 4, 7, 9, 12, 13, and 16. In order for a hypothesis to be rejected, the test categories had to differ both in their responses and in their degree of agreement, disagreement, and undecidedness. Table 2 summarizes the results of both hypothesis tests, and includes the percentage responses by question for each category and its statistical level of significance.

The second hypotheses stated that we expected no difference in the perceptions of ethical behavior of American and New Zealand respondents who had had professional ethics exposure. This hypothesis was not rejected. Only two of the 18 statements could be rejected with an alpha of 0.10 or less. These results provide strong evidence that those who had formal ethics training responded similarly, regardless of nationality. Thus it would appear that formal ethics training was a factor in bringing the American and New Zealand students' perceptions of ethical behavior closer together.

Since the results of these two hypotheses were different, additional hypothesis testing was performed. This testing included analysis for gender, American lower division students versus New Zealand lower division students, and American upper division students versus New Zealand upper division students. In each case the null hypothesis could not be rejected. Therefore, the only differences that could be found in the perceptions of American and New Zealand students were between those who had not been formally exposed to professional ethics.

Additional Analyses

When the responses to the individual statements are analyzed, there is evidence that a maturation takes place regarding ethical perceptions. This evaluation is based upon the responses of 14 professional accountants that were randomly selected to respond to the questionnaire. All of these were Americans. An analysis of the trend toward their responses is used to indicate a maturation of behavior toward that acceptable by the profession.

A mean response of less than 2.5 indicates agreement with the statement, while a mean response of greater than 3.5 indicates disagreement. Responses around a mean of 3.0 (2.5–3.5) were interpreted as indecisiveness about the question. These mean

responses for all questions are provided in Table 3. The first two data columns show the surveyed groups and the third column shows the responses of the control group of 14 professionals. The last column indicates how the professionals viewed each of the questions.

The questions in bold print in Table 3 indicate those where the surveyed groups moved toward the control group after they had been exposed to professional ethics training. Using question 1 as an example, the American students without exposure to professional ethics had a response mean of 3.78 and those with exposure to ethics had a response mean of 3.91 while the professionals had a mean response of 4.14. This type of before and after ethics exposure responses held for 13 of the 18 questions. Questions 4, 9, and 10 were difficult to evaluate because the control group gave undecided answers, an indication that insufficient information was provided for

Table 3. Mean responses

		Without ethics exposure	With ethics exposure	Professional response	
				Mean	Indication
1.	**US**	**3.78**	**3.91**	**4.14**	**Disagree**
	NZ	**3.19**	**3.58**		
2.	**US**	**2.32**	**2.23**	**1.57**	**Agree**
	NZ	**2.01**	**1.98**		
3.	US	4.34	4.41	5.00	Disagree
	NZ	4.07	3.97		
4.	US	3.07	3.31	3.00	Undecided
	NZ	2.54	3.06		
5.	**US**	**3.50**	**4.03**	**4.71**	**Disagree**
	NZ	**3.61**	**4.02**		
6.	**US**	**3.66**	**4.23**	**4.71**	**Disagree**
	NZ	**3.69**	**4.04**		
7.	**US**	**4.06**	**4.44**	**4.71**	**Disagree**
	NZ	**4.42**	**4.53**		
8.	**US**	**3.87**	**4.13**	**4.57**	**Disagree**
	NZ	**3.87**	**4.09**		
9.	US	1.84	2.17	2.57	Undecided
	NZ	2.29	2.51		
10.	US	3.35	3.71	3.43	Undecided
	NZ	3.21	3.45		
11.	**US**	**3.37**	**3.48**	**3.86**	**Disagree**
	NZ	**3.49**	**3.71**		
12.	**US**	**3.71**	**4.17**	**4.69**	**Disagree**
	NZ	**4.01**	**4.40**		
13.	**US**	**3.05**	**3.99**	**4.08**	**Disagree**
	NZ	**3.69**	**3.78**		
14.	**US**	**4.39**	**4.54**	**5.00**	**Disagree**
	NZ	**4.57**	**4.64**		
15.	**US**	**4.24**	**4.30**	**5.00**	**Disagree**
	NZ	**4.21**	**4.39**		
16.	US	1.45	1.36	1.43	Agree
	NZ	1.30	1.37		
17.	**US**	**4.68**	**4.73**	**5.00**	**Agree**
	NZ	**4.62**	**4.68**		
18.	**US**	**3.42**	**3.49**	**4.00**	**Agree**
	NZ	**3.41**	**3.48**		

Note: Bold type indicates that the null hypothesis can be rejected at a 90% confidence level.

them to reach a consensus. This leaves only questions 3 and 16 where the respondents did not show a maturation toward the responses of the control group. For question 3 there was little difference between the survey responses with the Americans showing a favourable trend and the New Zealanders having almost no change, although it was in the opposite direction to the control group. For question 16 all responses were so similar to each other that one could assume that the movements were insignificant. This question provides evidence that the students have a basic understanding of professional ethics, at least for certain types of actions.

Conclusion

In general, the results of the hypotheses testing showed a maturation process during the college years in which American and New Zealand students' perceptions of ethical behavior were brought closer together. While formal ethics training was a factor in this process, it should not be considered as the only influence on the students. Exposure to the professional business world, business professors, the maturation of individuals, and other factors in the college environment should all help to bring a more professional perspective of business ethics to the students.

What are the implications for accounting and business education? Our data are generally at odds with the assertion by Lane et al. that "... there is little empirical evidence to suggest that ethical behavior and decision-making are enhanced through ethical education".[18] However, it seems to relate to research conducted by Dolecheck and Dolecheck in the business sector. Their critique of employee ethics training is summarized as follows:

It is doubtful that ethics training sessions can teach ethics per se, but they should accomplish the following:
* Sensitize employees to the importance of ethical conduct.
* Alert employees to possible ethical situations.
* Help individuals think more clearly about relevant issues and discuss concerns and doubts
* Reduce the gray area on the ethical/unethical scale.[19]

Our study agrees with their results that indicate enhancement in ethical behavior comes from a general exposure to ethics, whether in the classroom or the business environment. This also supports the Treadway Commission's premise that the tone set by top management is the most important factor contributing to the integrity of the financial reporting process.[20] The observed maturation process indicates that as a person becomes more aware of the business environment, his/her behavior tends toward conformity with the accepted norm. This emphasizes the effect that high standards imposed from the top down can have in raising the level of ethical behavior within the business environment. This is a critical conclusion for college professors, who must set the tone in their classrooms for proper conduct regarding ethical matters, whether in discussing problems and cases or in our individual interactions with students and peers.

If personal ethics are enhanced by association with one's professors and business colleagues, and immersion in the business environment, the fact that many professional have had ethics training may service to raise the awareness of the group as a whole, especially as related to international business. In other words, it is possible that

those who have not had formal ethics training may emulate and adopt as the norm the ethics of those who have participated in formal ethics training. Additionally, some training in ethical behavioral issues occurs informally. For example, when the financial reporting issues of full disclosure and materiality are discussed, we are actually addressing the issue of fairness where third parties are concerned.

Ethics education as part of the college experience is a significant factor in the maturation process and has strong implications for the international training of future business managers. If the perceptions of ethics naturally come closer together through the education process in countries which have similar historical backgrounds (United States and New Zealand), it should be possible to at least expose students of other cultures to the ethics of their country's trading partners. In an era in which increased emphasis is being placed on moving toward internationalizing accounting and auditing standards, increased emphasis will have to be placed on moving toward a common perception of professional ethics.

Appendix

Tom Waterman

Tom a young management accountant, has been transferred to a new division from the corporate headquarters of a large diversified company. This new division was recently acquired, and its previous owner/president, Howard Heller, has been retained as divisional vice-president. Howard's background is marketing and he has a tendency to call his own shots. Joe, the division president, routinely "signs off" on Howard's expense reports without question, leaving Tom to check them after the fact. This action by Joe creates a series of conflicts between Tom and Howard over questionable items on Howard's expense reports.

Initially, Howard makes light of Tom's concerns by emphasizing that earnings are up, sales projections are high, and that it was his unorthodox approach which initially attracted headquarters to his company. Over time Howard goes from taking a few extra days at resort hotels after business trips to purchasing a video camera. Confidentially, Tom discusses his dilemma with a friend in internal audit. When Tom tells this friend that the division president routinely signs off on all of Howard's expense reports without bothering to check their appropriateness, his friend suggests that management may have a special deal with Howard or that maybe they are testing Tom.

In the last scene, we again find Tom challenging Howard. Howard has filed for reimbursement for some typing performed by his wife. This is a direct violation of written company policy. When Tom suggests that he is considering taking the matter to the company's audit committee for review, Howard blows up. Howard still sees no problem, the division president has approved the expenditure. He suggest that if Tom wants to grow with the company he must become a team player. He also points out that if Tom takes the matter to the board's audit committee there will be no turning back and that he feels certain the committee will back him (Howard) anyway.

Paul Tate

Paul is assistant controller for a medium-sized manufacturer of electrical equipment. As the controller is recuperating from an illness, Paul is managing the department. The controller is not expected to return for another six weeks. During this time, Paul receives a telephone call from an old friend who is starting a new, but highly risky, business venture. He wants Paul to extend credit so that he can purchase a sizable amount of equipment from Paul's company. Paul is aware of the risk and the lack of credit history for the new venture. He informs his friend that he will have to think about it.

Paul is finishing his call when the general manager walks in to remind him of a scheduled tennis match. Paul tells the manager about the conversation just completed. The manager is very interested in this potential business because he knows the company needs another $250,000 in sales to make the quarterly budget. He reminds Paul that meeting the budget would ensure bonuses for the executives as well as support the price of the company's stock.

After their tennis match, the general manager suggests that Paul might know some accounting methods which would enable the company to meet its quarterly sales budget. Paul mentions adjustments such as prematurely recording sales by shipping orders early or juggling sales and inventory figures. However, he is unsure of their legality and questions whether his boss, the controller, has ever used these methods.

A later scene shows Paul at his doctor's office for a check up. The doctor can find nothing amiss and suggests that Paul shows the classic symptoms of stress. During their conversation Paul describes the pressures at work, the fact that he is near retirement, and that he is facing added financial strain as one of his daughters has just been accepted for medical school. Meeting the sales objective would be very convenient. It would keep him in upper management's good graces and provide him with the much needed bonus. As the visit ends, we find Paul discussing his options with the doctor.

Several months pass. In the interim, Paul extended credit to his friend. The general manager is back in Paul's office. Paul's friend has not paid for the equipment. Paul reminds the manager that he warned him that the new venture was risky. The manager replies that while Paul did the right thing at the time, he assumed Paul checked out the credit worthiness of the new venture. Paul phones his friend. It becomes apparent from Paul's side of the conversation that his friend's company is having difficulty and that payment will not be made any time soon.

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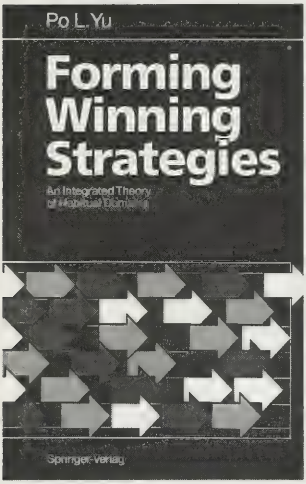

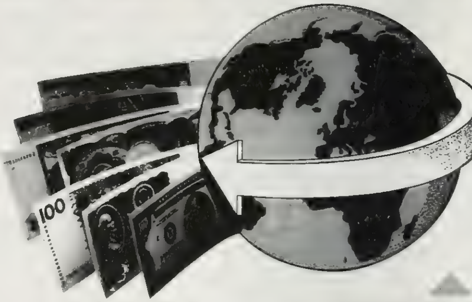

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AIMS and SCOPE The Aims of *The International Journal of Accounting* are to advance the academic and professional understanding of accounting theory and practice from an international perspective and viewpoint. The *Journal* recognises that international accounting is influenced by a variety of forces, e.g. governmental, political and economic.
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The International Journal of Accounting

An Analysis of Contributors to Accounting Journals. Part II: The Individual Academic Accounting Journals

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Key words: Accounting literature; Accounting journals; Research; Authors; International history

Abstract: *In a preceding paper (Part I, 26(3) pp. 202–217) we selectively identified 24 academic accounting journals. For the 7827 articles published in all these journals through 1988, we analyzed aggregate frequencies by contributors (authors) and their employers. The purpose of this paper (Part II) is to report the results on a disaggregated basis for each journal. Portions of Sections 1 and 2 of Part I are repeated in Part II for reader convenience.*

One point evidenced in this disaggregation analysis is that highest frequency contributors tend to spread their work around among different accounting research journals. In the past, top authors such as Professors Littleton and Chambers tended to publish in one or two journals almost exclusively. Modern-day writers are spreading their work among the many newer journals as well as older journals on the scene.

Introduction

The purpose of this paper (called Part II) is to report disaggregated frequencies by individual journals as a follow-up to our earlier reporting (in Part I) of the aggregated frequencies of publishing in 24 academic accounting journals. Changing trends in the 1979–1988 decade are contrasted with earlier history.

For convenience of readers, excerpts from Sections 1 and 2 of the Part I paper are repeated in Part II. The selected journals are listed in Table 1 along with various

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Table 1. Summary distribution for 24 academic accounting journals

Journal (inaugural year)	From inception through 1988		Decade 1979 through 1988	
	Number of articles	Number of authors	Number of articles (%)	Number of authors (%)
Abacus (1965) (Australia)	311	254	126 (41)	127 (50)
Accounting and Business Research (1970) (UK)	574	492	335 (58)	330 (67)
Accounting Historians Journal (1974)	219	200	151 (69)	156 (78)
Accounting Horizons (1987)	88	145	88 (100)	145 (100)
Accounting, Organizations and Society (1976) (UK)	376	398	297 (79)	319 (80)
Advances in Accounting (1984)	92	149	92 (100)	149 (100)
Advances in International Accounting (1987)	36	46	36 (100)	46 (100)
Advances in Public Interest Accounting (1986)	20	25	20 (100)	25 (100)
Advances in Taxation (1987)	22	45	22 (100)	45 (100)
Auditing: A Journal of Practice & Theory (1981)	121	173	121 (100)	173 (100)
Contemporary Accounting Research (1984) (Canada)	82	121	82 (100)	121 (100)
International Journal of Accounting (1965)	447[a]	456	185 (41)	240 (53)
Issues in Accounting Education (1983)	142	213	142 (100)	213 (100)
Journal of Accounting & Economics (1979)	102	126	102 (100)	126 (100)
Journal of Accounting & Public Policy (1982)	98	140	98 (100)	140 (100)
Journal of Accounting, Auditing & Finance (1977)	217	288	204 (94)	278 (97)
Journal of Accounting Education (1983)	187	287	187 (100)	287 (100)
Journal of Accounting Literature (1982)	51	83	51 (100)	83 (100)
Journal of Accounting Research (1963)	839[a]	706	415 (49)	403 (57)
Journal of the American Taxation Assn. (1979)	101	136	101 (100)	135 (100)
Journal of Information Systems (1986)	42	61	42 (100)	61 (100)
Research in Accounting Regulation (1987)	26	35	26 (100)	35 (100)
Research in Governmental & Nonprofit Accounting (1985)	43	52	43 (100)	52 (100)
The Accounting Review (1926)	3591	2246	460 (13)	546 (24)
Column totals	7827	6877	3426 (44)	4235 (62)
Number of different authors	—	4502		2563 (57)

[a]Two issues of the *International Journal of Accounting* were not available for coding due to publication delays. Also the 1988 *Supplement to the Journal of Accounting Research* was not available when the data were coded.

frequency tabulations. Several of the journals have relatively small frequency counts mainly due to their being newer on the scene. There are many more accounting journals world-wide that publish research (especially applied research), but they are targeted primarily toward non-academic readerships (practitioner, cost/managerial, and governmental accounting). The *Standard Periodical Directory* [1988] lists over 150 US accounting journals and magazines, most of which are aimed at practitioners. A number of "gray-zone" academic journals (especially foreign country publications) are excluded from the sample due to our limited access and/or familiarity with their targeted readership. In some countries the "schism" between academic and practitioner readership is not as severe as it currently is in the USA, and many foreign journals serve both readerships to a greater extent. We do include journals such as *Accounting Horizons* and several other newer journals that are trying to bridge the gap by reporting academic research to non-academics.

The considerable accounting research appearing in "non-accounting" journals is not included in the frequency counts. Journals in economics, management science, operations research, and other disciplines occasionally include accounting research

articles. Since these journals generally have a low overall rate of inclusion of accounting-type articles, however, these journals are excluded from our coding efforts. Adding such journals to the study would be difficult due to "gray zone" decisions on many articles as to the degree to which they represent "accounting" research.

Among the 24 journals included in Table 1, 16 (67%) commenced publishing in the past decade. Only four were publishing prior to 1970. Four of the 16 newest journals were inaugurated by the American Accounting Association (AAA) in the last decade, including *Accounting Horizons, Issues in Accounting Education, Auditing: A Journal of Practice and Theory,* and *Research in Governmental and Nonprofit Accounting.* These journals simultaneously reflect both a narrowing toward specialty areas and a widening AAA effort to interest practitioners in academic research findings. The Management Accounting Section of AAA launched its inaugural issue of a new journal in 1989. A similar academic journal is starting up in the United Kingdom. Also, Professor Tinker of Baruch College is launching a new journal entitled *Critical Perspectives on Accounting.* The point here is that outlets for academic research in accounting are increasing apace from four journals in 1970 to 30 or more journals in the 1990s.

The Accounting Review (TAR)

In this section, top contributors both to the entire history of *TAR* and to its last decade history will be contrasted. Since *TAR* is by far the oldest of these journals, somewhat more detailed coverage of *TAR* will be provided. The highest 191 (8.5%) contributors out of 2246 through 1988 to *TAR* are listed in Table 2. The majority of these top 191 authors are either deceased or in retirement. The leading all-time contributor, A.C. Littleton, is an outlier with 40 contributions adjusted down to 38.75 with fractional allowances for joint authorship. The next three from the top are Harold Bierman, Mary Murphy, and Harold Avery.

Table 2. Most prolific authors in *The Accounting Review (TAR)* listed by adjusted total appearances from 1926 through 1988

Adjusted frequency[a]	Author	Adjusted frequency[a]	Author
38.75 (40)	Littleton, A.C.	11.16 (12)	Dohr, James L.
18.33 (20)	Bierman, Harold	11.16 (12)	Greer, Howard C.
16.00 (16)	Murphy, Mary E.	11.00 (11)	Campfield, William
15.50 (16)	Avery, Harold G.	11.00 (11)	Singer, Frank A.
13.66 (15)	Kohler, Eric	10.16 (13)	Revsine, Lawrence
13.50 (16)	Mautz, Robert K.	10.00 (10)	Bowers, Russell
13.50 (14)	Kerrigan, Harry	10.00 (10)	Chambers, Raymond
13.16 (14)	Paton, William A.	10.00 (10)	Simon, Sidney I.
13.00 (13)	Scott, DR	10.00 (10)	Smith, Frank P.
13.00 (13)	Staubus, George	9.66 (14)	Demski, Joel
12.14 (13)	Taggart, Herbert	9.00 (12)	Bedford, Norton
12.00 (12)	Husband, George	9.00 (10)	Moonitz, Maurice
12.00 (12)	Lorig, Arthur N.	9.00 (10)	Perry, Kenneth W.
12.00 (12)	Mason, Perry	9.00 (9)	Benninger, Lawrence
11.50 (13)	Horngren, Charles	9.00 (9)	Graham, Willard

Table 2. continued

Adjusted frequency[a]	Authorf	Adjusted frequency[a]	Author
9.00 (9)	Howard, Stanley	5.50 (6)	Dixon, Robert L.
9.00 (9)	Rorem, C. Rufus	5.50 (6)	Green, David
9.00 (9)	Scovill, Hiram T.	5.50 (6)	Johnson, Orace
9.00 (9)	Stone, Williard	5.50 (6)	Schmidt, Leo A.
9.00 (9)	Van Voorhis, R.	5.50 (6)	Wasserman, Max J.
9.00 (9)	Vance, Lawrence	5.33 (8)	Swieringa, Robert
9.00 (9)	Vatter, William	5.33 (7)	Deakin, Edward B.
8.75 (10)	Morey, Lloyd	5.33 (7)	Kinney, William
8.50 (11)	Ijiri, Yuji	5.33 (7)	Livingston, John
8.00 (10)	Zeff, Stephen A.	5.33 (6)	Kircher, Paul
8.00 (8)	Briggs, L.L.	5.25 (6)	Himmelblau, David
8.00 (8)	Castenholz, W.	5.16 (8)	Beaver, William
8.00 (8)	Devine, Carl T.	5.16 (8)	Chow, Chee W.
8.00 (8)	Newlove, George	5.16 (8)	Jaedicke, Robert
8.00 (8)	Stettler, Howard	5.00 (8)	Weygandt, Jerry
7.50 (8)	Davidson, Sidney	5.00 (7)	Werner, Frank G.
7.50 (8)	Myers, John H.	5.00 (7)	Griffin, Charles
7.50 (8)	Raby, William L.	5.00 (6)	Borth, Daniel
7.33 (11)	Manes, Rene	5.00 (6)	Crumbley, D.L.
7.00 (8)	Usry, Milton F.	5.00 (5)	Allyn, Robert G.
7.00 (7)	Carson, A.B.	5.00 (5)	Briloff, Abraham
7.00 (7)	Corbin, Donald A.	5.00 (5)	Deroover, Raymond
7.00 (7)	Garner, S. Paul	5.00 (5)	Deinzer, Harvey
7.00 (7)	Kelley, Arthur C.	5.00 (5)	Grady, Paul
7.00 (7)	Li, David H.	5.00 (5)	Hay, Leon E.
7.00 (7)	Matz, Adolph	5.00 (5)	Homburger, Richard
7.00 (7)	Miller, Herbert	5.00 (5)	Kempner, Jack J.
7.00 (7)	Moyer, C.A.	5.00 (5)	Marple, Raymond
7.00 (7)	Preinreich, G.	5.00 (5)	Nelson, Edward G.
7.00 (7)	Sweeney, Henry W.	5.00 (5)	Peragallo, Edward
7.00 (7)	Thomas, Arthur L.	5.00 (5)	Prickett, A.L.
7.00 (7)	Zannetos, Zenon	5.00 (5)	Pye, Malcolm L.
6.83 (9)	Abdel-Khalik, A.R.	5.00 (5)	Saliers, Earl A.
6.83 (8)	Ferrara, William	5.00 (5)	Spienza, Samuel
6.50 (8)	Rappaport, Alfred	5.00 (5)	Shwayder, Keith
6.50 (7)	Miller, Hermann	5.00 (5)	Sprouse, Robert
6.33 (9)	Kaplan, Robert	5.00 (5)	Werntz, William
6.33 (8)	Ashton, Robert	5.00 (5)	Windal, Floyd, W.
6.00 (7)	Jennings, Robert	5.00 (5)	Wright, Howard, W.
6.00 (7)	Snyder, Ralph W.	4.83 (6)	Edwards, James D.
6.00 (6)	Byrnes, Thomas W.	4.83 (6)	Nurnberg, Hugo
6.00 (6)	Carey, John L.	4.66 (7)	Weil, Roman L.
6.00 (6)	Dein, Raymond C.	4.50 (8)	Petri, Enrico
6.00 (6)	Goetz, Billy E.	4.50 (7)	Sorter, George H.
6.00 (6)	Gordon, Myron J.	4.50 (5)	Anderson, Wilton
6.00 (6)	Hylton, Delmer	4.50 (5)	Benston, George
6.00 (6)	Krebs, William S.	4.50 (5)	Brighton, Gerald
6.00 (6)	Raun, Donald L.	4.50 (5)	Crum, William F.
6.00 (6)	Smith, C. Aubrey	4.50 (5)	Farman, Wilson L.
6.00 (6)	Trumbull, Wendel	4.50 (5)	Fremgen, James M.
6.00 (6)	Webster, Norman	4.50 (5)	Gordon, Dennis
6.00 (6)	Winter, Sidney G.	4.50 (5)	Hatfield, Henry
6.00 (6)	Yamey, Basil	4.50 (5)	Herbert, Leo
5.83 (7)	Jensen, Robert	4.50 (5)	Mauriello, Joseph
5.83 (7)	Sterling, Robert	4.50 (5)	Seiler, Robert E.
5.66 (8)	McKeown, James	4.33 (6)	Lev, Baruch
5.58 (11)	Cooper, William	4.25 (7)	Neter, John

Table 2. continued

Adjusted frequency[a]	Author	Adjusted frequency[a]	Author
4.16 (6)	Brief, Richard	4.00 (4)	Hein, Leonard W.
4.16 (5)	Peloubet, M.	4.00 (4)	Jackson, J. Hugh
4.14 (5)	Heckert, J.B.	4.00 (4)	Jones, Gardner M.
4.00 (7)	Decoster, Don	4.00 (4)	Kemp, Patrick S.
4.00 (6)	Felix, William L.	4.00 (4)	La Salle, Brother
4.00 (6)	Hughes, John S.	4.00 (4)	Mattessich, Richard
4.00 (5)	Firmin, Peter A.	4.00 (4)	McFarland, Walter
4.00 (5)	Gaa, Charles J.	4.00 (4)	McIntyre, Edward
4.00 (5)	Lawrence, Charlie	4.00 (4)	Mobley, Sybil C.
4.00 (5)	Schattke, Rudy	4.00 (4)	Nelson, Oscar S.
4.00 (5)	Sunder, Shyam	4.00 (4)	Noble, Howard S.
4.00 (5)	Winakor, Arthur	4.00 (4)	Osborn, Richards
4.00 (4)	Arnett, Harold E.	4.00 (4)	Salmonson, R.F.
4.00 (4)	Beights, David M.	4.00 (4)	Sanders, T.H.
4.00 (4)	Blough, Carman	4.00 (4)	Tannery, Fladger
4.00 (4)	Boyd, Ralph L.	4.00 (4)	Theiss, Edwin L.
4.00 (4)	Bruns, William J.	4.00 (4)	Wade, Harry H.
4.00 (4)	Buttimer, Harry	4.00 (4)	Whitney, William
4.00 (4)	Chasteen, Lanny	4.00 (4)	Wildman, John R.
4.00 (4)	Drebin, Allan R.	4.00 (4)	Yu, S.C.
4.00 (4)	Fagerberg, Dixon	4.00 (7)	Dopuch, Nicholas
4.00 (4)	Frisbee, Ira N.	4.00 (4)	Stickney, Clyde
4.00 (4)	Goldberg, Louis		
4.00 (4)	Gustafson, George	Less than 4.00	(2055 authors)
4.00 (4)	Hackett, Robert		

[a]Numbers in parentheses are total appearances of authors from the inaugural issue through 1988. Adjusted numbers reduce total appearances for fractional joint author credits. For example, two authors get 0.50 credit each, three get 0.33 credit each, etc.

The frequency distribution for all *TAR* issues for appearances not adjusted for joint authorship is shown in Table 3. It is quite obvious that publishing in *TAR* has been an infrequent occurrence for most authors. Less than 10% appear in *TAR* more than four times over its six-decade history between 1926 through 1988. However, over 36% managed to appear more than once in *TAR* as authors or co-authors.

Table 3. Frequency distribution (not adjusted for joint authorship) for all *TAR* issues

Author number of appearances	The Accounting Review (TAR) Since 1926 frequency (%)	Cumulative frequency (%)
1	1423 (63.4)	1423 (63.4)
2	394 (17.5)	1817 (80.9)
3	169 (7.5)	1986 (88.4)
4	81 (3.6)	2067 (92.0)
5	51 (2.3)	2118 (94.3)
6	35 (1.6)	2153 (95.9)
7	30 (1.3)	2183 (97.2)
8	19 (0.8)	2202 (98.0)
9	11 (0.5)	2213 (98.5)
10	8 (0.4)	2221 (99.9)
More than 10	25 (1.1)	2246 (100)

For comparative purposes, top appearances in *TAR* for only the 1979–1988 decade are listed in Table 4. Professor Chee Chow is somewhat of an outlier with eight appearances adjusted down to 5.16 for joint authorship. Lawrence Revsine and Robert Swieringa follow in the second and third position. Out of 2246 total *TAR* authors, 546 (24.3%) appeared in the last decade. Among the 546 contributors for this decade, only 85 (15.6%) have an adjusted frequency above 1.00 appearance.

Table 4. Most prolific authors in *The Accounting Review (TAR)* listed by adjusted total appearances from 1979 through 1988

Adjusted frequency[a]	Author	Adjusted frequency[a]	Author	Adjusted frequency[a]	Author
5.16 (8)	Chow, Chee W.	2.00 (2)	Knapp, Michael C.	1.50 (2)	Firth, Michael
4.83 (6)	Revsine, Lawrence	2.00 (2)	Lev, Baruch	1.50 (2)	Givoly, Dan
4.33 (6)	Swieringa, Robert	2.00 (2)	McCarthy, William	1.50 (2)	Howard, Thomas P.
3.33 (5)	Ashton,Robert	2.00 (2)	Mensah, Yaw M.	1.50 (2)	Johnson, W. Bruce
3.16 (5)	Stickney, Clyde	2.00 (2)	Nobes, Christopher	1.50 (2)	King, Raymond D.
3.00 (4)	Baldwin, Bruce A.	2.00 (2)	Peragallo, Edward	1.50 (2)	Klaassen, Jan
3.00 (6)	Uecker, Wilfred	2.00 (2)	Wallace, Wanda A.	1.50 (2)	Knechel, W. Robert
2.59 (4)	Halperin, Robert	2.00 (2)	Weber, Ron	1.50 (2)	Landsman, Wayne
2.50 (3)	Ashton, Alison	2.00 (2)	Weinstein, Edward	1.50 (2)	Mayer-Sommer, A.
2.50 (3)	Beaver, William	2.00 (2)	Williams, Paul F.	1.50 (2)	Newman, D. Paul
2.50 (3)	Brownell, Peter	2.00 (2)	Williamson, Robert	1.50 (2)	Schreuder, Hein
2.50 (3)	Ijiri, Yuji	2.00 (2)	Yamey, Basil	1.50 (2)	Sepe, James
2.50 (3)	Kaplan, Robert	2.00 (2)	Daley, Lane A.	1.50 (2)	Whittred, Gregory
2.50 (3)	Wright, Arnold	1.83 (4)	Ingram, Robert	1.50 (2)	Wolf, Frank M.
2.50 (3)	Zeff, Stephen A.	1.83 (4)	Snowball, Doug	1.33 (3)	Demski, Joel
2.33 (5)	Danos, Paul	1.83 (4)	Waller, William	1.33 (3)	Dietrich, J.
2.33 (4)	Kinney, William	1.83 (3)	Casey,Cornelius	1.33 (3)	Outslay, Edmund
2.33 (4)	Larcker, David F.	1.83 (3)	Elgers, Pieter T.	1.33 (3)	Simon, Daniel T.
2.33 (4)	Pastena, Victor	1.83 (3)	Madeo, Silvia A.	1.33 (2)	Hamlen, Susan S.
2.33 (3)	Dhaliwal, Dan S.	1.83 (3)	Patell, James	1.33 (2)	Jensen, Robert E.
2.33 (3)	Vigeland, Robert	1.83 (3)	Weil, Roman L.	1.33 (2)	Koch, Bruce S.
2.16 (4)	Bowen, Robert M.	1.66 (4)	Wolfson, Mark A.	1.33 (2)	Leftwich, Richard
2.16 (4)	Burgstahler, D.	1.66 (3)	Swenson, Charles	1.33 (2)	Manes, Rene
2.16 (4)	Schepanski, A.	1.50 (3)	Francis, Jere R.	1.33 (2)	Nichols, Donald
2.00 (4)	Felix, William L.	1.50 (3)	Grimlund, Richard	1.33 (2)	Patton, James M.
2.00 (4)	Hughes, John S.	1.50 (2)	Blocher, Edward	1.33 (2)	Shevlin, Terry
2.00 (3)	Zimmerman, Jerold	1.50 (2)	Chenhall, Robert	1.33 (2)	Steinbart, Paul
2.00 (2)	Bailey, William	1.50 (2)	Crum, William F.		
2.00 (2)	Hirst, Mark	1.50 (2)	Eskew, Robert K.	1.00 or less 461 authors	

[a] Numbers in parentheses are total appearances of authors from the1979 issue through 1988. Adjusted numbers reduce total appearances for fractional joint author credits. For example, two authors get 0.50 credit each, three get 0.33 credit each, etc.

The frequency distribution of unadjusted appearances over only the 1979–1988 decade is shown in Table 5. Most contributors appear only once in this decade; more than two appearances is a relatively rare phenomenon. An accounting researcher in modern times is a leader in *TAR* if he or she appears on average in this flagship journal once every 5 years.

Table 5. Frequency distribution (not adjusted for joint authorship) of appearances in *TAR* 1979–1988

Author number of appearances	The Accounting Review (TAR) 1979–1988 frequency (%)		Cumulative frequency (%)	
1	399	(73.1)	399	(73.1)
2	101	(18.5)	500	(91.6)
3	24	(4.4)	524	(96.0)
4	15	(2.7)	539	(98.7)
5	3	(0.5)	542	(99.3)
More than 5	4	(0.7)	546	(100)

Journal of Accounting Research (JAR)

Compared with a frequency of 3591 articles in the 1926–1988 history of *TAR*, the second highest article frequency is *JAR* in Table 1 with 839 articles in its 1963–1988 history. The most prolific authors in *JAR* are listed in Table 6. In contrast to *TAR*, the overwhelming majority of top authors in *JAR* are not yet retired and still are actively engaged in teaching and research. Also, there is a much higher rate of joint authorship in *JAR*. This is partly due to the bias of *JAR* toward large database empirical studies that often involve multiple researchers. It is also due to *JAR* being over three decades younger than *TAR*. The "recency effect" of a higher rate of joint authorships impacts more heavily on *JAR* than on *TAR* aggregate totals.

In the 25-year history of *JAR*, its most frequent contributor is Professor Gonedes with 12 appearances adjusted to 9.83 for joint authorships. Professors Beaver, Copeland, and Demski have 11 appearances. None of the top 20 in *TAR* also appears with highest frequency in *JAR*. There are, however, 24 professors (in Table 6 top 75 authors in *JAR*) that also appear in the Table 2 top 191 authors in *TAR*. These include retired professors Chambers, Davidson, Moonitz and Vatter. Professor Demski has had the highest dual hit rates in both *TAR* and *JAR*.

During the 1979–1988 decade, the highest two contributors to *JAR* have been James Ohlson and William Hopwood. Among the 403 *JAR* authors in this decade, 298 (73.9%) have adjusted frequencies of 1.00 or less, which is counter to the grain of opinion that the same people tend to publish repeatedly in *JAR*. There are, however, 30 (7%) contributors whose names appear on four or more *JAR* articles in the recent decade.

Accounting and Business Research (ABR)

The third highest all-time frequency journal is the *British Accounting and Business Research (ABR)*. In its 1970–1988 lifetime there were 574 *ABR* articles having appearances of 492 authors. The highest 49 authors are listed in Table 7. Although the majority of the top 49 are UK professors, over 15% are US professors and

Table 6. Most prolific authors in the *Journal of Accounting Research* (JAR) listed by adjusted total appearances from 1963–1988 and 1979–1988

1963 through 1988

Adjusted frequency[a]	Author
9.83 (12)	Gonedes, Nicholas
8.50 (11)	Demski, Joel
7.50 (9)	Kinney, William
7.33 (11)	Beaver, William
7.33 (10)	Ohlson, James
7.33 (9)	Abdel-Khalik, A.R.
6.83 (9)	Lev, Baruch
6.33 (9)	Sunder, Shyam
6.00 (7)	Kaplan, Robert
5.83 (11)	Copeland, Ronald
5.83 (8)	Libby, Robert
5.33 (9)	Ronen, Joshua
5.00 (7)	Brief, Richard P.
4.83 (7)	Ashton, Robert
4.83 (7)	Ingram, Robert
4.83 (7)	Verrecchia, Robert
4.83 (10)	McKeown, James
4.83 (9)	Hopwood, William
4.33 (9)	Dopuch, Nicholas
4.00 (4)	Dye, Ronald
4.00 (4)	Greenball, Melvin
4.00 (4)	Johnson, Orace
4.00 (4)	Scott, William
4.00 (4)	Vatter, William
4.00 (4)	Wright, F. Kenneth
3.91 (7)	Dyckman, Thomas
3.83 (6)	Ball, Ray
3.83 (5)	Livingstone, John
3.83 (5)	Zimmerman, Jerold
3.83 (9)	Ijiri, Yuji
3.58 (5)	Uecker, Wilfred
3.50 (6)	Biddle, Gary C.
3.50 (5)	Waymire, Gregory
3.50 (4)	Brownell, Peter
3.50 (4)	Chesley, George
3.50 (4)	Foster, George
3.50 (4)	Kida, Thomas
3.50 (4)	Magee, Robert
3.50 (4)	Moonitz, Maurice
3.50 (4)	Warren, Carl
3.33 (5)	Patell, James
3.16 (5)	Ricks, William
3.00 (4)	Antle, Rick
3.00 (4)	Davidson, Sidney
3.00 (3)	Chambers, Raymond
3.00 (3)	Drebin, Allan R.
3.00 (3)	Frishkoff, Paul
3.00 (3)	Jarrett, Jeffrey
3.00 (3)	Nurnberg, Hugo
2.83 (5)	Baiman, Stanley
2.83 (5)	Brown, Lawrence
2.83 (5)	Joyce, Edward
2.83 (5)	Lorek, Kenneth
2.83 (4)	Eggleton, Ian
2.83 (4)	Hilton, Ronald
2.83 (4)	Silhan, Peter
2.50 (3)	Brown, Paul R.
2.50 (3)	Casey, Cornelius
2.50 (3)	Frank, Werner
2.50 (3)	Gray, Sidney
2.50 (3)	Green, David
2.50 (3)	Grimlund, Q.
2.50 (3)	Lee, Chi-Wen
2.50 (3)	Menzefricke, U.
2.50 (3)	Morse, Dale
2.50 (3)	Smieliasuskas, W.
2.50 (3)	Penman, Stephen
2.33 (4)	Brenner, Vincent
2.33 (4)	Evans, John
2.33 (3)	Mock, Theodore
2.33 (3)	Freeman, Robert
2.33 (3)	Hughes, John S.
2.25 (3)	Gibbins, Michael
2.16 (5)	Neter, John
2.08 (5)	Swieringa, Robert
2.00 or (631 authors)	

1979 through 1988

Adjusted frequency[a]	Author
5.33 (9)	Ohlson, James
4.83 (9)	Hopwood, William
4.33 (6)	Libby, Robert
4.00 (4)	Dye, Ronald
3.83 (6)	Ingram, Robert
3.83 (6)	Verrecchia, Robert
3.83 (5)	Abdel-Khalik, A.R.
3.50 (6)	Biddle, Gary C.
3.50 (5)	Kinney, William
3.50 (5)	Waymore, Grogory
3.50 (4)	Brownell, Peter
3.50 (4)	Kida, Thomas
3.33 (6)	Sunder, Shyam
3.16 (5)	Ricks, William
3.00 (4)	Antle, Rick
2.83 (5)	Ashton, Robert
2.83 (5)	Brown, Lawrence
2.83 (4)	Hilton, Ronald
2.83 (4)	Silhan, Peter
2.58 (4)	Uecker, Wilfred
2.50 (3)	Brown, Paul R.
2.50 (3)	Casey, Cornelius
2.50 (3)	Lee, Chi-Wen
2.50 (3)	Menzefricke, ULR
2.50 (3)	Morse, Dale
2.50 (3)	Smierliauskas, W.
2.50 (6)	McKeown, James
2.33 (4)	Evans, John
2.33 (4)	Lorek, Kenneth
2.33 (4)	Patell, James
2.00 (4)	Demski, Joel
2.00 (3)	Cogger, Kenneth
2.00 (3)	Noreen, Eric
2.00 (3)	Smith, Abbie
2.00 (2)	Ashton, Alison
2.00 (2)	Atiase, Rowland
2.00 (2)	Bernard, Victor
2.00 (2)	Brown, Clifton
2.00 (2)	Dharan, Bala G.
2.00 (2)	Gibbins, Michael
2.00 (2)	Grimlund, Richard
2.00 (2)	Jain, Prem
2.00 (2)	Jiambalco, James
2.00 (2)	Kanodia, Chandra
2.00 (2)	Newman, D. Paul
2.00 (2)	Palmrose, Zoe
2.00 (2)	Penno, Mark
2.00 (2)	Schachter, Barry
2.00 (2)	Schneider, Arnold
2.00 (2)	Simunic, Dan
2.00 (2)	Suh, Yoon
1.83 (4)	Baiman, Stanley
1.83 (4)	Copeland, Ronald
1.83 (4)	Joyce, Edward
1.83 (4)	Wolfson, Mark A.
1.83 (3)	Beaver, William
1.83 (3)	Lewis, Beaver
1.83 (3)	Olson, Chris
1.83 (3)	Penman, Stephen
1.83 (3)	Trotman, Ken
1.67 or less (343 authors)	

[a] Numbers in parentheses are total appearances of authors. Adjusted numbers reduce total appearances for fractional joint author credits. For example, two authors get 0.50 credit each, three get 0.33 credit each, etc.

Table 7. Most prolific authors in *Accounting and Business Research (ABR)* listed by adjusted total appearances from 1970–1988 and 1979–1988

1970 through 1988 Adjusted frequency[a]	Author	1979 through 1988 Adjusted frequency[a]	Author
14.3 (17)	Lee, Thomas A	6.50 (7)	Lee, Thomas A.
8.00 (8)	Yamey, Basil	6.00 (6)	Ashton, Raymond K.
7.00 (7)	Whittington, George	6.00 (6)	Yamey, Basil
6.58 (8)	Parker, Lee D.	5.00 (5)	Choudhury, Nanda
6.00 (7)	Buckley, Adrian	5.00 (5)	Whittington, G.
6.00 (7)	Grinyer, John R.	4.58 (6)	Parker, Lee D.
6.00 (6)	Ashton, Raymond K.	4.16 (6)	Pike, Richard H.
5.50 (7)	Bhaskar, K.N.	4.00 (5)	Nobes, Christopher
5.00 (7)	Ma, Ronald	3.50 (5)	Bhaskar, K.N.
5.00 (6)	Nobes, Christopher	3.50 (4)	Steele, Anthony
5.00 (5)	Choudhury, Nanda	3.00 (4)	Edwards, John R.
5.00 (5)	Sizer, John	3.00 (3)	Hatherley, David
4.83 (7)	Peasnell, K.V.	2.50 (4)	Stanga, Keith G.
4.16 (6)	Pike, Richard H.	2.50 (3)	Belkaoui, Ahmed
4.16 (5)	Edwards, John R.	2.50 (3)	Firth, Michael
4.00 (4)	Bromwich, Michael	2.50 (3)	Grinyer, John R.
4.00 (4)	Hatherly, David	2.50 (3)	Houghton, Keith
4.00 (4)	Keane, Simon M.	2.50 (3)	Jones, Rowan
4.00 (4)	Mumford, Michael	2.50 (3)	Ma, Ronald
4.00 (4)	Staubus, George	2.00 (3)	Taffler, Richard
3.50 (4)	Firth, Michael	2.00 (2)	Abdolmohammadi, M.
3.50 (4)	Steele, Anthony	2.00 (2)	Adelberg, Arthur
3.00 (4)	Stanga, Keith	2.00 (2)	Ashton, D.J.
3.00 (4)	Morris, R.C.	2.00 (2)	Barnes, Paul
3.00 (4)	Wells, M.C.	2.00 (2)	Barron, Michael
3.00 (3)	Barnes, Paul	2.00 (2)	Coulthurst, N.J.
3.00 (3)	Barron, Michael	2.00 (2)	Dhaliwal, Dan S.
3.00 (3)	Bird, Peter	2.00 (2)	Egginton, D.A.
3.00 (3)	Dev, Susan	2.00 (2)	Filios, Vassilio
3.00 (3)	Forker, J.J.	2.00 (2)	Forker, J.J.
3.00 (3)	Forrester, D.A.	2.00 (2)	Forrester, D.A.
3.00 (3)	Lusk, Edward J.	2.00 (2)	Gul, Ferdinand A.
3.00 (3)	MacDonald, Graem	2.00 (2)	Hines, R.D.
3.00 (3)	Most, Kenneth S.	2.00 (2)	Hong, Han Kang
3.00 (3)	Patz, Dennis H.	2.00 (2)	James, Simon
3.00 (3)	Popoff, Boris	2.00 (2)	Lapsley, Irvine
3.00 (3)	Tippett, Mark	2.00 (2)	MacDonald, Graem
2.50 (5)	Gray, Sidney	2.00 (2)	Mole, R.H.
2.50 (4)	Arnold, John	2.00 (2)	Morris, Richard
2.50 (4)	Tweedie, D.P.	2.00 (2)	Mumford, Michael
2.50 (3)	Belkaoui, Ahmed	2.00 (2)	Patz, Dennis H.
2.50 (3)	Courtis, John K.	2.00 (2)	Peragallo, Edward
2.50 (3)	Dean, Peter N.	2.00 (2)	Pointon, John
2.50 (3)	Houghton, Keith	2.00 (2)	Schnable, Jacque
2.50 (3)	Jones, Rowan	2.00 (2)	Tippett, Mark
2.50 (3)	Mepham, Michael	1.83 (3)	Peasnell, K.V.
2.50 (3)	Stone, Williard	1.83 (3)	Ward, C.W.R.
2.50 (3)	Walker, R.G.	1.58 (3)	Sutcliffe, Paul
2.33 (3)	Goldberg, Louis		
2.00 or less (443 authors)		1.50 or less (282 authors)	

[a] Numbers in parentheses are total appearances of authors from the inaugural issue through 1988. Adjusted numbers reduce total appearances for fractional author credits.

assorted others are from Australia and Canada. Professor Lee stands out with twice as many (17) appearances in *ABR* as the next highest number (8) by Professors Yamey and Parker. The highest ranking contributors in the 1979– 1988 decade were Thomas Lee, Raymond Ashton, and Basil Yamey from the United Kingdom. In the 1979–1988 decade, US Professors Stanga and Belkaoui rank in the top 20 *ABR* contributors.

International Journal of Accounting (IJA)

The University of Illinois has produced *IJA* since 1965. Among the 24 Table 1 research journals, its 447 articles rank fourth highest in volume. There were 456 authors listed on those articles with over half being single authorships. Such solo effort high frequency is atypical in the past two decades. Another Table 1 journal with a high single-author proportion is the *Accounting Historians Journal (AHJ)* having well over half of its 200 authors writing by themselves. Since both *AHJ* and *IJA* have a relatively heavy focus on accounting history, it appears that history researchers have been less inclined to engage in joint authorship than other types of researchers in modern times.

The highest 21 *IJA* authors are identified in Table 8. As noted in Table 1, publication lags by *IJA* forced us to not code two awaited 1988 issues. The highest

Table 8. Most prolific authors in the *International Journal of Accounting (IJA)* listed by adjusted total appearances for 1965–1988 and 1979–1988

1965 through 1988		1979 through 1988	
Adjusted frequency[a]	Author	Adjusted frequency[a]	Author
5.00 (5)	Ameiss, Albert P.	2.50 (4)	Bloom, Robert
4.50 (5)	Choi, Frederick	2.50 (3)	Abdeen, Adnan
4.50 (5)	Jaggi, Bikki	2.50 (3)	Choi, Frederick
4.00 (6)	Farag, Shawki	2.50 (3)	Ndubizu, Gordian
4.00 (4)	Kosiol, Erich	2.50 (2)	Fekrat, M. Ali
4.00 (4)	Schoenfeld, Hann	2.00 (2)	Markell, William
4.00 (4)	Scott, George M.	2.00 (2)	McComb, Desmond
3.50 (4)	Jaruga, Alicja	2.00 (2)	Meek, Gary
3.00 (3)	Enthoven, Adolph	2.00 (2)	Schweikart, Jame
3.00 (3)	Gorelik, George	2.00 (2)	Violet, William
3.00 (3)	Linowes, David F.	1.50 (3)	Debassay, Araya
3.00 (3)	Markell, William	1.50 (2)	Abdel-Magid, M.
3.00 (3)	Mueller, Gerhard	1.50 (2)	Agrawal, S.
3.00 (3)	Skinner, R.C.	1.50 (2)	Berry, Maureen
3.00 (3)	Yu, S.C.	1.50 (2)	Buckmaster, Dale
2.50 (4)	Bloom, Robert	1.50 (2)	Burns, Jane O.
2.50 (3)	Abdeen, Adnan	1.50 (2)	Doupnik, Timothy
2.50 (3)	Barlev Benzion		
2.50 (3)	Ndubizu, Gordian	1.3 or less	(223 authors)
2.50 (3)	Radebaugh, Lee H.		
2.50 (5)	Smith, Charles H.		
2.0 or less	(435 authors)		

[a] Numbers in parentheses are total appearances of authors. Adjusted numbers reduce total appearances for fractional joint author credits.

17 contributors in the 1979–1988 decade are also listed in Table 8. Multiple hits in *IJA* have been infrequent in the 1979–1988 decade with only 21 (8.75%) out of 240 contributors having an adjusted frequency greater than 1.00.

Accounting, Organizations and Society (AOS)

The fifth highest in number of articles in Table 1 is *AOS*'s 376 articles published during the 13 year period 1976 through 1988. These articles were generated by 398 authors, the top 37 of whom are listed in Table 9. Even though *AOS* is published in the UK,

Table 9. Most prolific authors in *Accounting, Organizations and Society (AOS)* listed by adjusted total appearances from 1976–1988 and 1979–1988

1976 through 1988 Adjusted frequency[a]	Author	1979 through 1988 Adjusted frequency[a]	Author
6.66 (9)	Flamholtz Eric	5.53 (7)	Hopwood, Anthony
6.53 (8)	Hopwood, Anthony	4.83 (6)	Flamholtz, Eric
5.66 (8)	Ferris, Kenneth	4.66 (7)	Ferris, Kenneth
5.00 (9)	Birnberg, Jacob	4.50 (8)	Shields, Michael
4.83 (9)	Shields, Michael	3.83 (6)	Tinker, Tony
4.25 (8)	Cooper, David J.	3.83 (5)	Dillard, Jesse
4.00 (8)	Dirsmith, Mark	3.75 (7)	Cooper, David J.
4.00 (4)	Gambling, Trevor	3.50 (7)	Dirsmith, Mark
3.83 (6)	Tinker, Tony	3.33 (4)	Merchant, Kenneth
3.83 (5)	Dillard, Jesse	3.16 (6)	Birnberg, Jacob
3.66 (5)	Merchant, Kenneth	3.00 (6)	Covaleski, Mark
3.33 (5)	Govindarajan, V.	3.00 (4)	Boland, Richard
3.00 (6)	Covaleski, Mark	3.00 (4)	Govindarajan, V.
3.00 (4)	Ansari, Shahid	2.50 (3)	Williams, Paul F.
3.00 (4)	Boland, Richard	2.33 (4)	Waller, William
3.00 (3)	Belkaoui, Ahmed	2.33 (3)	Hayes, David
2.83 (4)	San Miguel, J.G.	2.00 (3)	Ansari, Shahid
2.50 (3)	Williams, Paul F.	2.00 (3)	Pratt, Jamie
2.33 (4)	Waller, William	2.00 (2)	Armstrong, P.
2.33 (3)	Hayes, David C.	2.00 (2)	Belkaoui, Ahmed
2.00 (3)	Dierkes, M.	2.00 (2)	Gambling, Trevor
2.00 (3)	Jonsson, S.	2.00 (2)	Houghton, Keith
2.00 (3)	Pratt, Jamie	2.00 (2)	Jones, C.S.
2.00 (2)	Argyris, C.	2.00 (2)	Kaplan, Robert
2.00 (2)	Armstrong, P	2.00 (2)	Richardson, A.J.
2.00 (4)	Hopper, T.M.	2.00 (2)	Schreuder, Hein
2.00 (2)	Houghton, Keith	2.00 (2)	Snowball, Doug
2.00 (2)	Jones, C.S.	2.00 (2)	Whitley, R.D.
2.00 (2)	Kaplan, Robert	2.00 (4)	Hopper, T.M.
2.00 (2)	Richardson, A.J.		
2.00 (2)	Schreuder, Hein	1.83 or less	(290 authors)
2.00 (2)	Snowball, Doug		
2.00 (2)	Swanson, E.B.		
2.00 (2)	Ullmann, A.A.		
2.00 (2)	Whitley, R.D.		
2.00 (2)	Wildavsky, A.		
2.00 (2)	Wright, William		
1.83 or less	(361 authors)		

[a] Numbers in parentheses are total appearances of authors. Adjusted numbers reduce total appearances for fractional joint author.

over half of the high frequency authors (and subscribers) are from the USA. This, in part, is due to *AOS* providing one of the first outlets for organization theory and accounting research that did not fit into editorial preferences of older journals. It is also due to the considerable efforts made by its sole editor to date (Anthony Hopwood) to attract submissions from nearly all countries of the world. In addition, most papers in *AOS* are aimed at international readers rather than topics of interest mainly to accountants in a local country. Many of the other journals in Table 1 carry a higher proportion of articles dealing with accounting and auditing standards of a particular country, notably SEC, FASB, AICPA, and CA controversies.

Professors Flamholtz, Hopwood, Ferris, Birnberg, Shields, Cooper, Dirsmith and Gambling rank at the top of the all-time *AOS* authors. The highest 29 contributors to *AOS* in the 1979–1988 decade are also listed in Table 9.

Abacus

The third oldest journal in Table 1 is *Abacus* from Australia with its 311 articles between 1965 and 1988. The 47 highest frequency authors out of 254 generating these articles are listed in Table 10. Professor Chambers, now retired, is an outlier with 22 appearances that adjust down to 20.5 for joint efforts. In spite of over two decades of publishing history, *Abacus* does not have many authors appearing more than once or twice (with Raymond Chambers being a unique exception.) Only 27 (11%) of its 254 authors between 1965 and 1988 have more than two appearances across the 24-year span. *Abacus* has always had British Commonwealth appeal and tends to attract authors outside Australia, particularly professors from the United Kingdom. Professor Sterling is the only US contributor to *Abacus* with a relatively high number (7) of appearances.

In the 1979–1988 decade, leaders shown in Table 10 include Professor Chambers followed by United Kingdom professors Ashton, Lee, and Stamp. Professors from the USA are infrequent contributors, although Paul Griffin, M.C. Findlay, Edward Williams, and Yaw Mansah appear in the list.

Other Table 1 Journals

The remaining 18 out of 24 Table 1 journals have each published considerably less than 300 articles. Except for the *Accounting Historians Journal* (1974) and the *Journal of Accounting, Auditing and Finance* (1977), the other 16 lower volume journals were inaugurated in the past 10 years. Combined, however, the newly fledged 16 journals account for 16% of the lifetime 7827 articles in Table 1. Hence by sheer number of journals (as opposed to a longer history), these young journals have a large share of total article volume. The 18 lowest volume journals account for 1689 (22%) of all 7827 articles in Table 1.

The most prolific authors in each of the 18 low volume journals are listed in Table 11. The journals are ordered in terms of number of articles disclosed in Table 1.

Table 10. Most prolific authors in *Abacus* listed by adjusted total appearances from 1965–1988 and 1979 and 1988

1965 through 1988 Adjusted frequency[a]	Author	1979 through 1988 Adjusted frequency[a]	Author
20.5 (22)	Chambers, Raymond	5.33 (6)	Chambers, Raymond
7.33 (9)	Ma, Ronald	3.00 (3)	Ashton, Raymond K.
7.00 (7)	Sterling, Robert	3.00 (3)	Lee, Thomas A.
5.33 (7)	Walker, R.G.	3.00 (3)	Stamp, Edward
5.00 (5)	Parker, R.H.	2.00 (3)	Ma, Ronald
4.50 (5)	Wells, M.C.	2.00 (3)	Peasnell, K.V.
4.00 (5)	Brooker, R.P.	2.00 (3)	Zimmer, Ian
4.00 (4)	Smith, R.G.E.	2.00 (2)	Brown, M.C.
4.00 (4)	Stamp, Edward	2.00 (2)	Gaffkin, J.J.
3.50 (4)	Clarke, F.L.	2.00 (2)	Griffin, Paul A.
3.00 (4)	Peasnell, K.V.	2.00 (2)	Grinyer, John R.
3.00 (3)	Ashton, Raymond K.	2.00 (2)	Houghton, Keith
3.00 (3)	Barton, Allan D.	2.00 (2)	Madan, Dilip B.
3.00 (3)	Gray, Sidney	2.00 (2)	Smith, R.G.E.
3.00 (3)	Lee, Thomas A.	1.83 (2)	Whittred, Greg
3.00 (3)	Thomas, Arthur L.	1.50 (2)	Findlay, M.C.
3.00 (3)	Wright, F. Kenneth	1.50 (3)	Williams, Edward
2.83 (4)	Whittred, Greg	1.50 (2)	Barlev, Benzion
2.50 (4)	Findlay, M.	1.50 (2)	Bromwich, Michael
2.50 (4)	Nichols, Donald	1.50 (2)	Clarke, F.L.
2.50 (3)	Cramer, Joe J.	1.50 (2)	Hirst, Mark
2.50 (3)	Greenball, Melvin	1.50 (2)	Mensah, Yaw M.
2.50 (3)	Lemke, Kenneth W.	1.50 (2)	Stokes, Donald J.
2.20 (3)	McRae, Thomas	1.50 (2)	Sullivan, Graham
2.00 (3)	Barlev, Benzion	1.50 (2)	Tippett, Mark
2.00 (3)	Birkett, W.P.		
2.00 (3)	Zimmer, Ian	1.00 or less (102 authors)	
2.00 (2)	Bodenhorn, Diran		
2.00 (2)	Brown, M.C.		
2.00 (2)	Craswell, A.T.		
2.00 (2)	Foster, George		
2.00 (2)	Graffikin, J.J.		
2.00 (2)	Griffin, Paul A.		
2.00 (2)	Grinyer, John R.		
2.00 (2)	Houghton, Keith		
2.00 (2)	Jack, Sybil M.		
2.00 (2)	Madan, Dilip B.		
2.00 (2)	Manley, P.S.		
2.00 (2)	Martinelli, Alva		
2.00 (2)	Mattews, Russell		
2.00 (2)	Moonitz, Maurice		
2.00 (2)	Parker, Lee D.		
2.00 (2)	Roebuck, Derek		
2.00 (2)	Scott, George M.		
2.00 (2)	Staubus, George		
2.00 (2)	Wanless, P.T.		
2.00 (2)	Wolnizer, P.W.		
2.00 or less (207 authors)			

[a] Numbers in parentheses are total appearances of authors. Adjusted numbers reduce appearances for fractional joint author credits. For example two authors get 0.50 credits each, three get 0.33 credit each, etc.

Table 11. Most prolific authors in 18 of the 24 Table 1 journals from the inaugural issue through 1988 (Journals ordered by number of articles in parentheses)

Adjusted frequency[a]	Author
Acctg. Historians Journal (219)	
6.50 (7)	Previts, Gary
5.50 (6)	Stone, Williard
5.00 (5)	Baladouni, V.
4.00 (4)	Holmes, William
4.00 (4)	Murphy, George
3.00 (3)	Brief, Richard
3.00 (3)	Davis, Harry A.
3.00 (3)	Paton, William A.
2.50 (3)	Gibson, Robert W.
2.50 (3)	Stevelinck, E.
2.00 or less (190 authors)	
J.of Acctg. Auditing & Finance (217)	
4.00 (4)	Raman, Krishnamu
3.50 (4)	Young, Allan E.
3.00 (3)	Bierman, Harold
3.00 (3)	Gamble, George O.
3.00 (3)	Gormley, R. James
2.66 (5)	Sorter, George H.
2.50 (5)	Schwartz, Bill N.
2.16 (5)	Ronen, Joshua
2.00 or less (280 authors)	
J. of Acctg. Education (187)	
2.00 (3)	Baldwin, Bruce A.
2.00 (2)	Courtis, John K.
2.00 (2)	Pratt, Jamie
2.00 (2)	Romney, Marshall
1.83 (3)	Chow, Chee W.
1.83 (2)	Frakes, Albert H.
1.66 (4)	Stout, David E.
1.50 (2)	Brownlee, E.R.
1.50 (2)	Collins, Marilyn
1.50 (2)	Harper, Robert
1.50 (2)	Howard, Thomas P.
1.50 (2)	Park, Hai G.
1.50 (2)	Paul, John W.
1.50 (2)	Schwartz, Bill N.
1.16 (3)	Friedlob, G.T.
1.00 or less (272 authors)	
Issues in Acctg. Educ. (142)	
2.50 (3)	Martin, James R.
2.00 (2)	Edwards, Thomas
2.00 (2)	Ijiri, Yuji
2.00 (2)	Lowenthal, Frank
2.00 (2)	Wu, Frederick H.
1.50 (3)	Schwartz, Bill N.
1.50 (2)	Kneer, Dan C.
1.50 (2)	O'Doherty, Brian
1.50 (2)	Robinson, Loudel
1.50 (2)	Siegel, Philip H.
1.33 (2)	Ott, Richard L.
1.25 (2)	Umpathy, S.
1.00 or less (201 authors)	

Adjusted frequency[a]	Author
Auditing: A.J. of Pract. & Theory (121)	
2.83 (6)	Reckers, Philip
2.33 (5)	Mock, Theodore
2.33 (4)	Wright, Arnold
2.00 (2)	Kinney, William
2.00 (2)	Knechel, W.R.
2.00 (2)	Mutchler, Jane F.
2.00 (2)	Palmrose, Z.
1.83 (4)	Messier, William
1.83 (4)	Pany, Kurt
1.50 or less (164 authors)	
Journal of Acctg. & Econ. (102)	
4.00 (2)	DeAngelo, Linda
4.00 (4)	Verrecchia, Robert
3.08 (5)	Leftwich, Richard
2.08 (4)	Holthausen, Robert
2.00 (3)	Zimmerman, Jerold
2.00 (2)	Foster, George
2.00 (2)	Wong, Jilnaught
1.83 (5)	Beaver, William
1.53 (3)	Christie, Andrew
1.50 (4)	Hagerman, Robert
1.50 (4)	Zmijewski, Mark
1.50 (2)	Francis, Jere R.
1.50 (2)	Larcker, David
1.50 (2)	Lev, Baruch
1.50 (2)	McNichols, Maureen
1.50 (4)	Thomas, Jacob
1.50 (2)	Trueman, Brett
1.33 (3)	Smith, David B.
1.33 (2)	Healy, Paul M.
1.33 (2)	Palepu, Krishna
1.16 (3)	Collins, Daniel
1.16 (3)	Lambert, Richard
1.00 or less (104 authors)	
J. of the American Tax. Assn. (101)	
3.50 (4)	Porcano, Thomas
2.50 (4)	Outslay, Edmund
2.00 (3)	Jones, Sally
2.00 (3)	Michaelsen, Robert
2.00 (3)	Schnee, Edward J.
2.00 (2)	Jordan, William
1.83 (3)	O'Neil, Cherie J.
1.83 (3)	Parker, James E.
1.50 (3)	Boley, Richard
1.50 (3)	Englebrecht, Ted
1.50 (3)	Karlinsky, Stewart
1.50 (2)	Blumenfrucht, I.
1.50 (2)	Broden, Barry C.
1.50 (2)	Kramer, Sandra S.
1.50 (2)	Milliron, Valerie
1.50 (2)	Weber, Richard P.
1.50 (2)	Wilkie, Patrick
1.33 (3)	Hreha, Karen S.

Table 11. continued.

Adjusted frequency[a]	Author
1.33 (2)	Anderson, Kenneth
1.33 (2)	Crumbley, D.L.
1.00 or less (116 authors)	
J. of Acctg. & Public Policy (98)	
3.00 (3)	Benston, George
2.00 (3)	Ingram, Robert
1.83 (3)	Gordon, Lawrence
1.66 (4)	Marks, Barry R.
1.66 (4)	Raman, Krishnamu
1.50 (2)	De Jong, Douglas
1.50 (2)	Greer, Willis R.
1.50 (2)	Stark, A.W.
1.33 (3)	Giroux, Gary
1.00 or less (131 authors)	
Advances in Acct. (92)	
2.33 (4)	Reckers, Philip
2.00 (3)	Kaplan, Steven
1.83 (3)	Raman, Krishnamu
1.75 (3)	Abdolmohammadi, M.
1.50 (2)	Blocher, Edward
1.50 (2)	Chen, Kung H.
1.50 (2)	Wright, Arnold
1.33 (2)	Ketz, J. Edward
1.33 (2)	Stevens, William
1.00 or less (140 authors)	
Accounting Horizons (88)	
2.00 (2)	Nurnberg, Hugo
1.50 (2)	Sanborn, Robert
1.00 or less (143 authors)	
Contemporary Acctg. Res. (82)	
2.66 (5)	Smieliauskas, W.
2.00 (2)	Chambers, Raymond
2.00 (2)	Thornton, Daviel
1.50 (2)	Abdolmahammadi, M.
1.50 (2)	Amey, Lloyd
1.50 (2)	Chesley, George
1.50 (2)	Feltham, Gerald
1.50 (2)	Scott, William
1.33 (2)	Boritz, J. Efrim E.
1.33 (2)	Demski, Joel
1.00 or less (111 authors)	
Journal of Acctg. Literature (51)	
1.66 (3)	Solomon, Ira
1.00 or less (82 authors)	
Res. in Govt. and Nonprofit Acctg. (43)	
4.50 (5)	Wallace, Wanda A.
1.83 (3)	Patton, James M.
1.50 (2)	Chan, James L.
1.50 (2)	Rubin, Marc A.
1.33 (2)	Wilson, Earl R.
1.33 (2)	Parry, Robert W.
1.33 (2)	Robbins, Walter
1.00 or less (45 authors)	
J. of Information Systems (42)	
2.00 (2)	Harper, Robert
1.50 (3)	Stocks, Kevin
1.50 (2)	Borthick, A. Fay
1.50 (2)	Grabski, Severin
1.33 (2)	Fields, Kent
1.00 or less (56 authors)	
Advances in International Acctg. (36)	
1.50 (2)	Doubnik, Timothy
1.00 or less (45 authors)	
Research in Acctg. Regulations (26)	
2.00 (2)	Martin, J.W.
1.50 (2)	Wallace, Wanda A.
1.33 (3)	Parker, Larry M.
1.00 or less (32 authors)	
Advance in Taxation (22)	
2.00 (3)	Hunt, Herbert G.
1.00 (1)	Hite, Peggy, A.
1.00 (1)	Singleton, W.R.
1.00 (1)	Stevens, Kevin T.
1.00 (1)	Toolson, Richard
Less than one (40 authors)	
Advances in Public Interest Acctg. (20)	
1.00 (1)	Becker, James F.
1.00 (1)	Boland, Richard
1.00 (1)	Briloff, Abraham
1.00 (1)	Chatov, Robert
1.00 (1)	Chua, Wai Fong
1.00 (1)	Cooper, David J.
1.00 (1)	Estes, Ralph
1.00 (1)	Jensen, Robert E.
1.00 (1)	Kelley, Thomas P.
1.00 (1)	Knights, David
1.00 (1)	Lehman, Cheryl R.
1.00 (1)	Parker, Lee D.
1.00 (1)	Puxty, Anthony G.
1.00 (1)	Tinker, Tony
1.00 (1)	Ullmann, John E.
Less than one (10 authors)	

[a]Numbers in parentheses are total appearances of authors from the inaugural issue through 1988. Adjusted numbers reduce total appearances for factional joint author credits. For example two authors get 0.50 credit each, three get 0.33 credit each, etc.

Some of the noteworthy achievers in Table 11 are Professors Previts, Stone, and Baladouni in the *Accounting Historians Journal*. Linda DeAngelo set the pace for the *Journal of Accounting and Economics*. Professor Reckers has six inclusions in *Auditing: A Journal of Practice and Theory* and four in *Advances in Accounting*. Thomas Porcano did very well in the new *Journal of the American Taxation Association*. Professor Smieliauskas at the University of Toronto excelled in *Contemporary Accounting Research* published in Canada. Wanda Wallace has most certainly done her share for *Research in Governmental and Nonprofit Accounting*. Professor Raman has excelled in the *Journal of Accounting, Auditing and Finance*.

Conclusion

The main purpose of Part II of the database analysis has been to acknowledge the highest frequency contributors to each of the 24 academic accounting journals listed in Table 1. Part I focused on the aggregated set of 24 as a whole. Part II highlighted each journal.

Most contributors of highest frequency do not rank high in more than one journal, especially in our tabulations for the 1979–1988 decade. They do, however, tend to appear in multiple journals such that their work is spread around various specializations.

The simultaneous rise in the number of new journals and tendencies toward joint authorship has led to greater dispersal of authorships. Whereas A.C. Littleton and others from the past contributed almost exclusively to one of a few available journals, top performers in recent years appear with lower frequency in a larger number of journals. Professor Wanda Wallace, for example, is the highest contributor among all 24 Table 1 journals for the 1979–1988 decade. Her work, however, is spread among many of the journals with the highest concentration being five acceptances in the new *Research in Governmental and Nonprofit Accounting*.

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Accounting and Auditing Implications of Complying with the United States' Foreign Corrupt Practices Act Amendments of 1988

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Key words: Accounting policy; Auditing policy; Audit committee; Internal control; Foreign Corrupt Practices Act; Management legal responsibilities.

Abstract: *The Foreign Corrupt Practices Act (FCPA) Amendments of 1988 eased US restrictions on foreign trade by eliminating vague language (which was accompanied by civil and criminal penalties) from the original 1977 FCPA, replacing such language with a requirement that the managers of US corporations continue to develop internal accounting and auditing policies and procedures regarding conflicts of interest, along with internal procedures ensuring compliance with those policies. This article provides a synopsis of the new law, compares the new law to the original FCPA, and discusses the role of the audit committee in the development of a system of compliance...*

When the Foreign Corrupt Practices Act (FCPA) Amendments of 1988 were signed into law as part of an omnibus trade bill, US exporters could breathe a little easier. The 1988 Amendments have removed one of the statute's strongest disincentives for foreign commerce: the threat of statutory criminal liability based on accidental or unknowing negligence in the retention of certain accounting records. As a result of the Amendments, only corporate employees who "knowingly" circumvent corporate accounting controls or falsify records of corporate payments or transactions are now subject to criminal liability.

The primary purposes of this article are (1) to provide a brief synopsis of the new law ("amended FCPA" or "amended Act"); (2) to identify the most significant changes from the original provisions of the 1977 version of the FCPA ("original FCPA" or "1977 FCPA"); and (3) to suggest how these changes could affect compliance standards and the role of the corporate audit committee.

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Background

The Original FCPA represented a response by Congress to the discovery that bribery of foreign officials and other forms of unsavory conduct were often used by American companies to secure business abroad.[1] So widespread was the appearance of corruption, that Securities and Exchange Commission investigations led some to the conclusion that over 300 American companies had made questionable payments to foreign officials.[2]

Congress enacted the 1977 FCPA with the understanding that bribery by business officials was *per se* unethical and detrimental to American business.[3] Despite the fact that bribery is simply a way of doing business in many countries, and that by restricting American companies in this fashion, Congress was providing foreign companies (whose countries were less concerned as to the morality of bribery) with export incentives and an opportunity to edge out American companies in many situations.[4] As was indicated at hearings on the original FCPA, Congress believed that bribery (a) tainted the credibility of American business operations and the principles of free enterprise in general; (b) caused embarrassment with allies and foes alike; (c) created foreign policy difficulties; and (d) generally tarnished the world's image of the USA.[5]

Anti-Bribery Provisions

The FCPA itself, as originally enacted, consisted of two parts. One part conceals the prohibitions against bribery, inserted both as an amendment to the Securities and Exchange Act, as applied to publicly held companies considered "issuers" of securities, and as an identical stand-along provision directed at all other American businesses.[6] Generally, the original Act prohibits corporate officers from participating (or "having reason to know" of participation by subordinates' or affiliates' participation) in, bribes or offers of bribes to foreign officials in order to obtain or retain business.

"Grease payments," or payments to essentially clerical or low-level employees for purposes of facilitating performance of administrative functions, such as expediting shipments through customs, securing required permits, and obtaining adequate police protection, are treated as an implied exception under the original Act.[7] The exception is in the form of a definition of foreign officials who are recipients of payments, since the original FCPA states that term "official" does not include any employee of a foreign government or any department, agency, or instrumentality thereof whose duties are essentially ministerial or clerical. Nevertheless, it is not clear from the original statute just how "low-level" a recipient must be to preclude prosecution of the American payor, nor is liability dependent in any way upon the actual purpose of the payment. Finally, there is no actual definition of grease payments under the original FCPA.

Accounting Provisions

In addition to the anti-bribery stipulations, the original FCPA contains record-keeping requirements, imposing a duty upon all issuers of securities to keep books, records

and accounts in reasonable detail, and in a manner that accurately reflects the transactions and dispositions of assets of those issuers.[8] In addition, companies are required to develop and maintain a reasonable system of internal control.[9] Congress hope that these accounting standards would lead to greater credibility of corporate records and less likelihood of concealment of bribes by American corporations.[10]

Penalties

Both the anti-bribery and the accounting provisions of the original FCPA are enforced via civil and criminal liabilities.[11] The SEC has jurisdiction for the investigation of issuers who may have violated the anti-bribery and accounting provisions, and may bring a civil injunction action against an issuer as well as refer a case to the department of Justice for prosecution.[12] The Department of Justice has authority to investigate American companies other than issuers, and directs all criminal prosecutions.[13] In addition, the Criminal Division of the Department of Justice has offered to respond to written requests for an advance indication of its position in light of specific circumstances under its "Review Procedures."[14]

The Need for Change

After passage, some critics began complaining that US businesses were losing overseas sales because they were unable to compete with firms from countries that allow bribes.[15] Others argued that the original FCPA was simply too vague, especially when the severity of the civil and criminal penalties are considered.[16] In particular, there was a great deal of concern about the phrase "knowing or having reason to know" as found in the anti-bribery provisions; the phrase creates potential liability, including criminal prosecution, if an American business person merely "ought to know" that a payment (even to an affiliate not owned or controlled by the US concern) would result in a bribe at some future point.[17]

Most of the proponents of the 1988 changes, however, made every effort to affirm the original purposes of the FCPA. During hearings in Washington, D.C. on the 1988 bill, it was found that the FCPA has been effective in curtailing bribes, kickbacks and other unethical activities; it was concluded that the principal objectives of the FCPA should be maintained because they are important to the nation and our trade relationships.[18] But the accounting standards of the FCPA were unclear, and the Act did not provide a clear statement of compliance and enforcement practices.

In addition, US firms lost trade and incurred increased costs directly attributable to the passage of the FCPA.[19] For example, John T. Subak of Rohm & Haus Co., testified before the Senate in 1983 that compliance with the FCPA caused his firm to increase audit costs by 50%, while losing \$15 to \$20 million in sales.[20] According to a 12980 Government Accounting Office (GAO) report, at least 30% of all US firms engaged in foreign business cited the unclear language of the FCPA as a prime reason for having lost business abroad.[21] Although the exact extent of these lost sales was unmeasurable, such losses clearly were significant.

Many businesses have also found information or the scope and meaning of the FCPA difficult to obtain. Preferring to err on the safe side, these firms have often incurred costs substantially exceeding the eventual benefits. The 1988 Amendments attempt to correct these shortcomings as demonstrated in Table 1.

An Analysis of the 1988 Amendments

Changes to Accounting Standards

The original FCPA required publicly traded companies–even those with no international operations–to devise and maintain systems of internal accounting control which provide "reasonable assurance' that transactions are properly authorized and recorded, assets are adequately safeguarded, and recorded balances are periodically verified. Individual violators faced up to five years imprisonment, a $10000 fine, or both, while corporations faced fines of up to $1 million. Although the SEC was required to define both "adequacy" and "reasonable assurance" of controls in determining the severity of such penalties, the original FCPA did not specifically define compliance procedures. Moreover, the 1977 statute gave the Justice Department, rather than the SEC, responsibility to mete out criminal penalties to violators, without granting the Department investigative authority (e.g., to subpoena witnesses).

As noted in Table 1, the amended FCPA assesses only civil, not criminal penalties to negligent (i.e., unintentional) violators of the accounting provisions. However, criminal liability can still be assessed in cases of "scienter" (intent to deceive), such as deliberately falsified books and records, or circumvented internal controls intended to make or conceal illegal payments, including failing to correct known weaknesses in internal controls.

Under the original FCPA, the SEC had wide altitude in pressing material violations. The Chief Accountant of the SEC stated that "Although a 10-cent error is technically in violation of the FCPA, the SEC will not prosecute a company exhibiting 'reasonable judgment' unless 'reckless intent' is demonstrated." However, many businessmen were unsure of exactly how the SEC would define materiality, recognizing that some controls can prevent or detect at an early stage most conceivable errors or irregularities, whether intentional or unintentional, including those resulting from collusion. However, no all-inclusive list of conceivable errors or irregularities could ever be prepared, not could *affordable* detective or preventative controls be designed and implemented to conform to the requirements of the original FCPA.

Policy-making Responsibilities of Management

The 1988 Amendments clarify management's responsibilities for implementing and maintaining a system of internal accounting control. Recognizing that a perfect system of internal accounting control (i.e., a system which would prevent or immediately detect errors, irregularities or illegal activities) would cost more to implement

Table 1.

Statutory requirements	1977 Original FCPA	1988 Amended Act	Citation to new law
Operational standards			
General FCPA violations: Definition of criminal intent	Intent not required: mere "Reason to know" is sufficient for prosecution	Knowingly: limited to include "high probability" unless actual belief otherwise	15 U.S.C. 78dd-1 (ff) (2) 15 U.S.C. 78dd-2 (h) (3)
Consequent of "grease payments"	Possible criminal and civil sanctions	No consequence; no reporting.	15 U.S.C. 78dd-1 (b) 15 U.S.C. 78dd-2 (b)
Definition of "grease payments"	Not defined	Defined: "routine governmental action" includes clerical processing, licenses, etc.	15 U.S.C. 78dd-2 (f) (3) 15 U.S.C. 78dd-2 (h) (4)
Consequence of expense reimbursements or	Possible criminal and civil sanctions	No consequence; No reporting.	15 U.S.C. 78dd-1 (c) 15 U.S.C. 78dd-2 (c)
Accounting standards			
Negligent violation of internal control standards	Both civil and criminal sanctions	Civil Sanctions only	15U.S.A. 78m (b) (4)
Criminal violation of standards defined?	Not defined	Defined, based on "knowingly circumvent..."	15 U.S.C. 78m (b) (5)
Consequence of noncompliance by uncontrolled addilieate (i.e., less than 50% owned)	Possible criminal and civil sanctions	None if good faith effort to influence affiliate compliance	15 U.S.C. 78m(b) (6)
Level of detail prescribed	Not defined	Defined: "same level of prudence as own affairs."	15 U.S.C. 78m (b) (7)
Administrative provisions			
Regulatory clarification of FCPA	No provision	Guidelines to be issued after public hearing	15 U.S.C. 78dd-1 (d) U.S.C. 78dd-2(e)
Advance opinion letters from attorney general	No provision	Available within 30 days of request (once procedure is established)	15 U.S.C. 78dd-1 (e) 15 U.S.C. 78dd-2 (f)
Negotiations with other nations regarding cooperative implementation	No provision	President is asked to initiate such negotiations, & report back	15 U.S.C. 78dd-1 (note)

and maintain than could be justified by the benefits derived, the 1988 Amendments define "reasonable assurance" and "reasonable detail" as that which would satisfy a prudent individual under similar circumstances. Management must now weigh the cost–benefit of strengthening internal accounting controls and implement those judged economically feasible. The 1988 Amendments also specify that accounts and records should be kept in "reasonable detail"; that no liability will accrue for inadvertent errors; and that the "prudent businessmen" standard will be used in determining those reasonable assurances.

The 1988 Amendments still require management to devise and maintain a system of internal accounting controls to provide assurances of transactional authorization, recording, limited access assets and periodic accountability. However, prosecution of a domestic person or concern can only be achieved if the person or concern (1) failed to provide "reasonable assurance" that the required system of internal accounting controls was "in place and functioning"; (2) could not demonstrate a "good faith" effort to comply with those requirements; or (3) *knowingly* circumvented an established system of internal accounting control.

Operational Standards (Anti-Bribery Provisions)

The 1988 Amendment's anti-bribery provisions more clearly define "grease" payments. Corporations may make such payments to foreign officials if they have little decision-making authority and if those officials have no significant impact on US relations with the foreign government involved, provided the payments are intended to expedite or facilitate trade. For example, a small payment may be made to gain assistance in unloading at dockside, to obtain adequate police protection, or even to insure the proper performance of the *duties* of the foreign official.

The original FCPA virtually precluded a US person or concern from making any payment to foreign officials to obtain, direct or facilitate the business of that person or concern. The 1988 Amendments specifically permit such payments if they help expedite routine governmental action, are legal in that foreign country or demonstrate gratitude or reimbursement for expenses incurred in connection with a contract. The 1988 Amendments also specify the extent of a parent company's liability for actions of a non-wholly owned subsidiary: the parent company need only show that it acted in good faith to influence the subsidiary to comply with the 1988 Amendments in order to avoid liability. The presumption is that the parent–subsidiary relationship had not been intentionally structured to escape liability. Moreover, under APB Opinion No. 18 and FASB Interpretation No. 35, parent firms presume no parent company "influence" if they own less than 20 percent of the subsidiary's voting securities.

Corporate Ethics and the Role of the Audit Committee

Implementing "Good Faith"

While the 1988 Amendments do not define "good faith," companies should recognize that *The Model Business Corporation Act* defines "in good faith" as "honestly" or "in an honest manner" in preventing management or directors from relying on data known to be false or misleading. Furthermore, a review of the literature furnishes suggestions for corporate actions to ensure operational "good faith":

(1) To minimize the uncertainty of oral communications, a written corporate code of conduct, including methods of adhering to it, should form part of Corporate Accounting Practices and Procedures Manuals, which all publicly traded firms should establish.

(2) Certain top managers and executives should complete "Conflict of Interests Questionnaires" and sign statements indicating that they adhered to corporate procedures regarding questionable payments.

(3) In order to provide additional evidence to demonstrate compliance with the 1988 Amendments, firms can: (a) request internal auditors to monitor adherence to these procedures, and (b) assure that the review of internal controls includes an examination of compliance with the 1988 Amendments (e.g., engaging the independent public accountants to review internal controls, including adherence to the FCPA and the 1988 Amendments, as denoted in *Statement on Auditing Standards No. 30).*

In 1982, for example, the St. Paul Company revised their Code of Conduct to include sections on Conflicts of Interest (e.g., employees should exercise care in selecting personal brokers; the senior investment officer should review this selection); political participation (e.g., employees are encouraged to participate in the political process *as private citizens only*; employee-related and customer-related issues (e.g., compensation policies and giving or accepting gratuities); and enforcement (periodic checking by the internal audit department).

The Audit Committee's Role: Monitoring Compliance

The Treadway Commission, furthermore, stressed in 1988 that all firms should adopt, publicize, and enforce written codes of conduct that contain a conflict-of-interest policy and a corporate policy of compliance with domestic and foreign laws, including those related to a company's proprietary information. The Commission emphasized that the audit committee should review compliance with the corporate code, and report its findings to the entire board of directors and the corporate code should protect whistle blowers.

Internal auditing's primary role in the monitoring of codes of conduct would, in fact, be a major boon to the profession. For example, helping the audit committee review compliance with the corporate code exposes the internal audit department to the highest levels of the corporation. In helping update, monitor, and enforce the code, internal auditors can assume new responsibilities. In protecting whistle blowers, the process aids "nonpublic accountants facing an ethical conflict between professional norms and employer norms or actions."[22]

Assuming the role of ethics watchdog for corporations is not the distasteful task that it may seem at first glance. Reducing the possibility of fraud is a public and private service. In 1982, financial fraud exceeded $55 billion annually by some estimates, and that amount may have increased considerably by now.[23]

In any event, the FCPA might not leave the corporate audit committee much choice in the matter. As noted above, the amended FCPA requires that management devise and maintain a system of internal accounting controls geared to FCPA compliance. The logical first step in the development of such a system would be the development of a corporate code of conduct, as recommended by the Treadway Commission and others.

Finally, the 1988 Amendments provide that, within six months of its passage, after consultation with the business community, consideration will be given by Congress and the SEC to the development of *specific* guidelines for conducting foreign operations and *general* guidelines which could be voluntarily adopted to assure compliance with the Act. The audit committees of companies affected by the 1988 Amendments need to be involved in that consultation process, for their own protection.

Conclusion

The 1988 Amendments to the FCPA provide, at once, an opportunity and a challenge. US corporations will have the opportunity to engage in foreign commerce without threat of civil and criminal prosecution based on vague concepts of "knowing or having reason to know." And they have a challenge, that is, to develop policies, such as an updated corporate code of conduct reflecting conflict-of-interest concerns, which will make it unnecessary for the SEC or the Congress to reassert itself in the area of foreign trade practices. The corporate audit committee is the management group most ideally equipped for leading the corporate response to that challenge.

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An Analysis of Alternative Tax Treatments of the Net Income of Controlled Foreign Subsidiaries of US Multinational Corporations

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Key words: Foreign subsidiary; International taxation; International trade; Multinational corporation; Public policy; Tax compliance

Abstract: *Operations of US-based multinational corporations (MNCs) are vital to the economic well-being of the United States. Because of their extreme complexity, the tax laws regarding the taxation of foreign subsidiaries of US MNCs are an impediment to both international trade and tax compliance. A number of simplifying alternatives to current law have been proposed over the years. This paper examines the impact of current tax law and the major alternatives. The first part of the paper concerns the tax burden of a hypothetical model firm. The second part of the paper concerns US MNCs generally and US MNCs in selected countries.*

Introduction

US multinational corporations (MNCs) conduct a significant proportion of their business in foreign countries through wholly-owned or majority-owned subsidiaries that are incorporated in foreign countries. For example, in 1982, the latest year for which aggregate information is available concerning foreign operations of MNCs, foreign subsidiaries of US MNCs had $37 billion of pre-tax earnings compared to only $14 billion for foreign branches [States, 1986, p.52].

The net income of foreign subsidiaries of US MNCs could potentially be a source of significant tax revenue for the United States. However, generating tax revenues is not the only goal of US tax policy. Another important goal relates to promoting public policy goals, one of which is to encourage US firms to engage in international trade [cf., Smith, 1987, p.43]. Unfortunately, current tax law fails in both these areas, generating relatively little tax revenue (as will be shown) and impeding the

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development of international trade by US firms [cf., McClure and Bouma, 1989]. Consequently a number of alternatives to current tax law have been proposed over the years. This study evaluates the impact of various taxation approaches regarding the foreign subsidiaries of US MNCs. The primary objective of the study is to determine whether a simpler tax system could be implemented that would better accomplish the revenue and public policy goals of the federal government.

A major motivation for this study is that international tax issues have been identified as major concerns facing MNCs [cf., Smith and Lassila, 1989 and Lassila and Smith, 1989]. The cost to MNCs of complying with the US tax system involves not only the taxes actually paid but also the administrative costs of preparing and filing the tax returns. As tax laws become more complex, the cost of preparing and filing returns increases. Concerning administrative costs, Ross [1990, p.335] indicated the following:

> Administrative costs are mounting for US-based multinationals, and these costs alone may impede international business activities. A great deal of the information that is required to be generated for tax reporting purposes serves no business function.

Regarding the impact of complexity on tax compliance, Ross [p.333] stated:

> There has been relatively little attention paid to the problems of the Internal Revenue Service in trying to administer the massive number of new, complicated provisions. It is not an exaggeration to speculate that there will be widespread noncompliance, both intentional and inadvertent, with many of the new provisions and relatively little ability of the Internal Revenue Service to deal with this by audit activity and litigation.

Because the foreign operations of MNCs are a critical aspect of overall US business activities and because US tax rules applicable to foreign operations could affect decisions of MNCs concerning foreign operations, any alternatives to the present tax system should be carefully scrutinized before being seriously considered for adoption. To accomplish this, the study will determine and comparatively analyze the US tax burden on MNC foreign subsidiary net income under the current law and the major alternatives. The US tax burden on MNC foreign subsidiary net income under current law and major alternatives to current law should be a major input into any future congressional action concerning the taxation of foreign subsidiary net income.

This study first reviews the current rules on the taxation of MNC foreign subsidiary net income and the major tax simplification alternative to the present system that have been proposed over the past 30 years. Next, previous research concerning the US tax burden on MNC foreign subsidiary net income is described and evaluated. Finally, the determination and comparative analysis of the US tax burden on such net income under current law and major alternative systems are presented in two distinct methodological sections. The first section develops a theoretical model and presents the results of computations using that model to analyze the US tax burden on a hypothetical foreign subsidiary in a variety of circumstances. As a result of the computational analysis, a number of hypotheses concerning the USTB on MNC foreign subsidiary net income are developed. The second methodological section determines and analyzes the US tax burden on MNC foreign subsidiary net income from an aggregate and empirical standpoint, including analysis by selected countries. The results of the empirical analysis are used to evaluate the hypotheses.

Taxation of the Net Income of Foreign Subsidiaries Under Current Law

The net income of foreign branches of MNCs is fully includable in the gross income of the MNCs whether they actually receive it or not because branches are merely parts or divisions of MNCs [IRC Sec. 61]. On the other hand, the net income of a foreign subsidiary, that is wholly-owned or controlled by an MNC, is generally not subject to tax until that income is repatriated in the form of dividends or in a liquidating distribution and/or is attributable to US sources [IRC Secs. 881 and 882]. It is evident that if the foreign-source net income of a foreign subsidiary is reinvested by the subsidiary as retained earnings, the US taxation of that income can be deferred indefinitely even if that foreign subsidiary is wholly-owned by the MNC. This phenomenon is known as "deferral." Through deferral, US MNCs can save or postpone the payment of US taxes by using foreign subsidiaries to conduct foreign business. Further, if foreign subsidiaries are established in countries that impose little or no foreign income taxes (often referred to as tax haven countries), US and foreign income taxes can be virtually permanently avoided, unless the SubPart F provisions apply (discussed later).

An important question associated with the taxation of MNC foreign subsidiaries is whether the United States should tax the income that is earned and taxed in a foreign jurisdiction. That is, should US MNC foreign subsidiary net income be taxed twice, once by a foreign jurisdiction and a second time by the United States? One rationale why the United States should receive some tax revenue from US MNC foreign subsidiary net income is provided under the "benefit" theory of taxation [see Arnold 1986, p2]. Under this theory, those who benefit from government services should pay for them. MNCs derive significant benefits from a wide range of government expenditures, whether their income is earned from foreign sources (e.g., from the operation of foreign incorporated subsidiaries) or domestic sources. The US capitalistic system that provided for the generation of the funds for MNC operations is maintained and protected by government activities (e.g., activities of the Securities and Exchange Commission). Further, defense outlays of the US government have helped preserve the independence of Europe and other areas where hundreds of MNC subsidiaries have been established and become profitable. Therefore, certain income from foreign subsidiaries should be subject to US taxation.

US tax policy currently applies the benefit theory to an extent by subjecting certain income of MNCs to tax. However, such income is not taxed by the United States to the extent that the applicable US tax is offset by the foreign tax credit (described in the next section). As a result, a subsidiary in a foreign jurisdiction with relatively high income and withholding tax rates pays less US taxes than a subsidiary in a foreign jurisdiction with relatively low tax rates.

Foreign Tax Credit

MNCs are not subject to US tax on the net income of their foreign subsidiaries until the MNCs receive dividends or other distributions from the foreign subsidiary. Even then the MNC may ultimately pay little or no US tax on the dividends because of the

foreign tax credit. Under IRC Section 901, an MNC can take a foreign tax credit against its US tax liability for the foreign withholding taxes imposed on distributions it receives from a foreign subsidiary.

The MNC is also allowed an indirect foreign tax credit under IRC Section 902 for the foreign corporate income taxes attributable to the earnings and profits of its foreign subsidiary from which the dividends were paid. An indirect credit is also allowed under IRC Section 960 for foreign corporate income taxes attributable to SubPart F income (see the discussion of SubPart F below) of the subsidiary includible by the US parent. Note that the dividends received and SubPart F income reported by an MNC must be "grossed-up" (i.e., increased) by the amount of the indirect credit permitted [IRC Sec. 78].

The foreign tax credit cannot exceed the US taxes that are attributable to the foreign subsidiary income which is taxable under US law (i.e., the dividends paid to the MNC, SubPart F income and the Section 78 dividend gross-up amounts). If the foreign tax rate is higher than the US tax rate, the US taxes attributable to the taxable foreign subsidiary income will be fully offset by the credit for foreign taxes paid, and the US government will receive no tax revenue with respect to the foreign subsidiary income. In such a case, the US taxpayer will have an unused foreign tax credit, due to the foreign tax credit limitation described above. Unused foreign tax credits can be carried back two years and forward up to five years to be used in such future years [IRC Sec. 904].

Legislative Action Concerning the US Taxation of MNC Foreign Subsidiary Net Income

By the early 1960s, concern over the advantages and perceived tax abuses associated with the deferral phenomenon led to significant US legislative action. Among the tax abuses perceived were cases where MNCs would establish subsidiaries in countries that imposed no income taxes. In such instances the foreign subsidiary would be used to sell goods and services overseas. The income from such sales would be totally free of tax until it was distributed to the MNC.

SubPart F

The Kennedy Administration proposed to end deferral completely by requiring MNCs and other US shareholders of controlled foreign subsidiaries to report their share of the net income of such subsidiaries as the net income is earned, whether or not that income is actually distributed as dividends [Arnold, 1986]. However, Congress refused to terminate deferral completely and, instead, enacted the SubPart F provisions of the Internal Revenue Code (IRC Sections 951 through 964) under which in certain situations, some undistributed net income of controlled foreign subsidiaries is taxed to MNCs and other US shareholder owners. Such taxed undistributed net income is called SubPart F income.

Under SubPart F, a US shareholder is taxed on that shareholder's share of the "foreign base company income" of a "controlled foreign corporation." A US

shareholder is considered to be any person (including an MNC) who owns 10 percent or more of the foreign corporation's combined voting power [IRC Sec. 958]. A "controlled foreign corporation" is a foreign subsidiary whose stock is more than 50 percent or more owned by US shareholders (as defined in IRC Section 958) [IRC Sec. 951(a)]. Under IRC Section 954, the term "foreign base company income" includes the following categories of income:

(1) foreign personal holding company income;

(2) foreign base company sales income;

(3) foreign base company service income;

(4) foreign base company shipping income; and

(5) foreign base company oil-related income.

If the foreign base company income plus certain foreign insurance income is smaller than the lesser of (a) 5 percent of gross income or (b) $1000000, no amounts will be taxable under SubPart F. However, if the foreign base company income and certain foreign insurance income exceed 70 percent of the gross income from foreign subsidiaries, the US shareholder will be subject to tax on its share of all its applicable foreign subsidiary net income.

Although any further technical description of SubPart F is beyond the scope of this study (for further description, see Arnold [1986]), it should be noted that SubPart F is highly technical and quite complex.[1]

Despite the fact that SubPart F is extremely complex, the provisions have not dramatically lessened the advantage of deferral. The amount of taxable income recognized under SubPart F has been very small relative to the total amount of taxable income from foreign sources. For example, in 1982, the Internal Revenue Service published statistics indicate that of the $59.2 billion of taxable income from foreign sources, only $4.2 billion was income taxable under SubPart F [Simenauer, 1986]. Thus, the amount of tax revenue generated through SubPart F has been relatively small. Some reasons why SubPart F generates such small tax revenue include:

(1) SubPart F does not apply to all foreign subsidiaries; it applies only to those that are defined as controlled foreign corporations.

(2) SubPart F applies only to certain limited, technically defined types of income, and the rules can be avoided by structuring operations or transactions so as not to come under the narrow definitions.

(3) "De minimis" exception rules shield a certain amount of SubPart F income from tax.

Legislative Changes Since 1962

Since the enactment of SubPart F in 1962, numerous amendments have been made to the tax treatment of controlled foreign subsidiary earnings and the determination of the allowable foreign tax credit. For example, the SubPart F minimum distribution rule was repealed by the Tax Reduction Act of 1975, and the per-country limitation for the foreign tax credit was repealed by the Tax Reform Act of 1976. In addition,

the tax reporting requirements of US persons with foreign-source income have been strengthened. None of these changes, however, have altered the basic structure of the system of taxing foreign subsidiary net income.

The Tax Reform Act of 1986 has continued the "tinkering" with the existing system by broadening the application of SubPart F within existing categories and diminishing the exemptions from SubPart F treatment [1986 Act Secs. 1221–1227]. The Act also amended and further complicated the foreign tax credit rules by requiring the separate calculation of the allowable amount of the foreign tax credit for each of several categories of income [Act Secs. 1201–1205]. It is widely acknowledged that these new provisions have greatly complicated the international tax rules faced by MNCs, in general, and have increased the US tax burden on MNCs in certain industries [cf., Ross, 1990]. Further, the 1986 Act changes were made to increase tax revenues in order to enable the 1986 Act to be revenue neutral overall, and the changes were made with little regard to their impact on international tax complexity and compliance and foreign investment activities of MNCs [McClure and Bouma, 1989]. Nevertheless, the 1986 Act did not fundamentally alter the present system of taxing foreign subsidiary net income (i.e., deferral and the foreign tax credit).

Proposals to Change the US Taxation of Foreign Subsidiary Net Income

Over the years, a number of alternatives to the present system of deferral and the foreign tax credit have been proposed and some have been introduced as actual bills in Congress. The primary motivations for these proposals have been to simplify the way in which MNC foreign subsidiary earnings are taxed and to increase the amount of tax revenue collected by the Federal government with respect to that income. Three of the most prominent alternatives, which are compared with current law in the analysis section of the study, are as follows:

(1) eliminate deferral, but retain the foreign tax credit;
(2) eliminate deferral and the foreign tax credit;
(3) eliminate deferral and the foreign tax credit, but tax foreign subsidiary net income at a low flat rate.

These alternatives are summarized below.

Eliminate Deferral; Retain Foreign Tax Credit

During recent years, US presidents and others have proposed to end deferral by requiring that US shareholders of controlled foreign corporations be taxed on their share of the foreign corporation's net income whether distributed or not. Such US shareholders would be permitted a foreign tax credit on account of foreign income taxes and foreign withholding taxes levied on such net income.

The Kennedy Administration first proposed terminating deferral in the early 1960s [Arnold, 1986]. In 1978, the Carter Administration proposed ending deferral as part

of the Administration's 1978 tax revision proposal [see Dept. of the Treasury, 1978]. The Carter Administration claimed that terminating deferral would be beneficial for several reasons including:

(1) terminating deferral would permit simplification of the tax rules relating to foreign income;
(2) terminating deferral would end an alleged tax incentive to invest overseas at the expense of domestic investment;
(3) terminating deferral would help stop practices used to avoid US taxes.

More recently, a proposal to terminate deferral was included in the Bradley–Gephart tax reform bill [see Joint Committee, 1985]. However, the Tax Reform Act of 1986 did not contain any provision that would have terminated deferral. Yet, the possibility of further legislative consideration of terminating deferral remains. For example, Thuronyi [1989] indicates that the termination of deferral is a viable possibility in future tax reform legislation.

Opponents of terminating deferral have claimed that the allowance of deferral actually helps US companies compete abroad and that such foreign investment actually creates more jobs in the United States by enabling US companies to penetrate foreign markets effectively. Terminating deferral would actually hurt the US economy [see Committee on Ways and Means, 1977].

Eliminate Deferral and the Foreign Tax Credit

A more "extreme" proposal than merely terminating deferral was the one contained in the Burke–Hartke bill [H.R. 62, Foreign Trade and Investment Act of 1973, 93rd Cong., 1st Sess., 1973]. The Burke–Hartke bill proposed that deferral be eliminated and that foreign taxes paid be allowed only as a deduction, rather than as a credit The proponents of the bill saw it as a means of simplifying the tax code, generating additional tax revenue, and ending significant tax incentives to invest overseas. Few tax bills have generated such a barrage of negative sentiment as Burke–Hartke [see Committee on Ways and Means, 1973 and Committee on Finance, 1974]. Major businessmen, academics, and even a "Big-6" CPA firm, Arthur Andersen and Co., railed against Burke–Hartke, claiming that enactment of the bill would significantly increase the US tax burden on foreign subsidiary earnings and would sharply reduce the competitiveness of the United States in world markets.

Eliminate Deferral and Foreign Tax Credit and Tax Foreign Subsidiary Income at a Low Flat Rate

A more moderate proposal than that contained in the Burke–Hartke bill is to eliminate deferral and the foreign tax credit, but then tax US shareholders separately on their share of foreign subsidiary net income at a flat rate that is much lower than the highest US corporate income tax rate (i.e., at a "low flat rate" such as 5, 10, or 20 percent) and permit them to deduct foreign taxes paid in determining the amount subject to the flat rate. Scallen [1977] proposed that foreign subsidiary earnings be

separately taxed at a rate of 10 percent and that foreign taxes paid be permitted as a deduction in determining that separate tax. A rate of 10 percent is also used in this study as an example of a low flat rate to extend Scallen's analysis and because it is less than one-third of the current top US corporate marginal rate of 34 percent.

Smith [1974, p.160] indicated that this method was considered by the US Treasury during the 1950s as "a way to secure some revenue from all income from foreign sources while removing the invitation to other countries under the existing tax credit system to raise their rates to our levels". While this method was not proposed to Congress at that time because it was thought that it would increase the US tax burden on foreign-source income, proponents have argued that the method would result in a vast simplification of the US taxation of foreign subsidiary earnings and yet would produce some tax revenue from foreign subsidiary earnings.

Finally, the low flat rate alternative was actually included in a limited way in the Senate version of the Tax Reduction Act of 1975 [see Senate Report No. 36, 94th Cong. 1st Sess., 1975]. The Senate bill would have eliminated deferral and the foreign tax credit on foreign oil-related income and taxed such income at a flat rate of 24 percent (after allowing a deduction for foreign taxes). While this proposal was not enacted by Congress, the fact that it was seriously considered by Congress indicates the potential legislative interest in the low flat rate alternative.

Previous Research

Little previous research has been done to determine the US tax burden on MNC foreign subsidiary net income. In 1975, the Joint Committee on Internal Revenue Taxation compiled and published a study entitled *Taxation of Foreign Source Income: Statistical Data* [Joint Committee, 1975]. The study included an analysis of the foreign and US tax burden on MNC foreign subsidiary net income overall and by industry for the years 1968 and 1972 under the then prevailing US tax rules. The study did not analyze the possible impact of alternatives to the rules in effect at that time. The US tax burden was determined by dividing the net US tax (determined using the then top corporate marginal rate of 48 percent) attributable to MNC foreign subsidiary net income by the net income of foreign subsidiaries before any taxes.

In 1968, the US tax burden was only 1.1 percent of MNC foreign subsidiary net income and only 0.4 percent in 1972. Clearly, the US tax system in effect at that time provided very little tax revenue to the US Treasury with respect to foreign subsidiary net income. Unfortunately, neither the Joint Committee nor any other government agency has published such statistical studies for more recent years.

Is the US government entitled to tax revenues from foreign operations? There are a number of rational arguments why the US government, even as a secondary tax collector, should receive some revenue with respect to MNC foreign subsidiary net income. As previously discussed, the "benefit" theory of taxation provides one rationale for this aspect of US tax policy.

The first major non-governmental study concerning the US tax burden on MNC foreign subsidiary net income was the Arthur Andersen study [1978]. The Andersen study surveyed MNCs and received 88 responses concerning their foreign subsidiary

net income, taxes, and foreign tax credits for 1976. The study data obtained from the surveys were used to determine the potential impact of ending deferral (but retaining the foreign tax credit). The study questioned the overall estimates of the Carter Administration that termination of deferral would increase tax revenues by $500 million [see Dept. of the Treasury, 1978].

The Andersen study suggests that if deferral were eliminated, MNCs might react (i.e., change their behavior) by accelerating their payment of foreign taxes by such means as using relatively slow methods of depreciation and/or by increasing their dividend payout rate to as much as 100 percent. The study concluded that if such a reaction occurred, that US tax revenues would actually decrease and that only foreign governments would derive increased tax revenues. A study by Nordhauser and Kramer (1981) suggests that US corporations might change their corporate structures in response to the elimination of deferral. Nordhauser and Kramer evaluated the impact of terminating deferral on a hypothetical firm assuming it did nothing in response to the termination of deferral or undertook one of the four possible separate restructuring moves. They concluded that restructuring the company by decontrolling subsidiaries or relocating in a tax haven would, in many cases, provide sufficient net benefits for shareholders to warrant the expense of making the change and thus, the termination of deferral could reduce US tax revenues.

Although the Andersen and the Nordhauser and Kramer studies present some interesting findings, the relevance of their results is limited because:

(1) the Andersen study only evaluated the impact of ending deferral on a number of firms and not all MNCs;

(2) the Nordhauser and Kramer study did not study the impact of terminating deferral on actual MNCs;

(3) neither study analyzed the potential impact of other possible changes in the law concerning the treatment of MNC foreign subsidiary net income.

The present study extends the previous analyses by evaluating the potential impact of three major alternatives to present law on the US tax burden on the net income of all MNC controlled foreign subsidiaries. For this purpose, US tax burden is defined in the same manner as in the 1975 Joint Committee study discussed earlier, that is, the net US tax payable divided by the net income of the foreign subsidiary after foreign corporate income taxes have been subtracted.

The computations in this analysis are made under the assumption that MNCs would not substantially alter business practices, in order to determine the full impact of each of the possible changes. However, some commentary is provided as to possible behavioral changes in cases where an alternative to current law would result in more than a moderate US tax burden.

The two alternative proposals which would repeal the foreign tax credit (the Burke–Hartke proposal and the low flat rate proposal) may result in a greater overall tax burden (US and foreign, combined) on the net income of MNC foreign subsidiaries operating in foreign countries with relatively high tax rates (e.g., West Germany) than for those in countries with low rates (e.g., Panama). However, this tax consequence does not necessarily rule out the viability of the alternates (particularly, the low flat

rate alternative). The simplification in the tax rules (e.g., the elimination of the burdensome SubPart F and foreign tax credit rules) would make compliance with the foreign tax rules easier and less costly for MNCs to prepare tax data and for the IRS to administer.

In light of all of the various alternative proposals, the question of what is "fair" is often debated by tax policy makers. This study will not directly address the issue of "fairness" of the proposals but will focus on the tax consequences of the proposals.

The analysis will determine the approximate tax impact that would result from the enactment of alternatives that have the potential of simplifying the tax treatment of MNC foreign subsidiary net income.

Research Approach and Methodology

The present study determines, analyzes, and compares the US tax burden (USTB) on the net income of MNC controlled foreign subsidiaries under the existing tax system (deferral, SubPart F, and the foreign tax credit) and the following three alternative proposals described earlier in this paper:

(1) terminate deferral, but retain the foreign tax credit;

(2) terminate deferral and the foreign tax credit (allow a deduction for foreign taxes); and

(3) terminate deferral and the foreign tax credit, but tax foreign subsidiary net income at a low flat rate (i.e., 10 percent).

The analysis of the USTB on foreign subsidiary net income is presented in two distinct methodological sections listed below.

The first section, "Model Development and Computations", presents a theoretical model for determining the USTB of a hypothetical MNC foreign subsidiary under current law and the three alternative proposals and the results of computations using the model to analyze the USTB on the net income of the hypothetical MNC foreign subsidiary in a variety of circumstances. The analysis also considers the case of an MNC foreign subsidiary, that has recognized income under SubPart F of the Code that exceeds its dividend payments to its MNC parent. This analysis is used to develop seven hypotheses concerning the USTB on foreign subsidiary net income.

The second section, "Aggregate Empirical Analysis", analyzes the USTB of all MNC controlled foreign subsidiaries as well as those operating in specific countries in recent years for which published IRS tax statistics are available and uses this information to evaluate the hypotheses presented at the end of Model Development and Computations section.

Model Development and Computations

This section presents and illustrates the use of a theoretical model that can be used to determine the USTB on the net income of an MNC controlled foreign subsidiary under current law and major tax simplification alternatives to current law. This

section next presents and analyzes the results of computations using the model to determine and analyze comparatively the USTB of a model firm under a variety of circumstances. Finally, hypotheses concerning the USTB on the net income of MNC controlled foreign subsidiaries are presented for further analysis.

Development of the USTB Calculation Models

Five specific taxation alternatives are considered in the development of the USTB Calculation Models. They are as follows:

(A) current law (deferral allowed);

(B) end deferral but retain the foreign tax credit;

(C) end deferral and foreign tax credit, but allow foreign taxes as a deduction (Burke–Hartke proposal);

(D) end deferral and foreign tax credit, and tax earnings at a low flat rate (after deducting foreign taxes);

(E) current law but where SubPart F income exceeds the subsidiary's dividend distributions.

The model equations for determining the US tax burden (USTB) under each alternative are presented below. The derivation of the model equations is presented in the Appendix.

Equation 1 Model equations expressing the determination of the USTB under current law.

$$USTB = [(1-r)PBT\ (t-wh\ (1-f) - f)]/PBT$$

where:

PBT = the net income of the subsidiary before subtraction of foreign income taxes

t = the applicable (or effective) U.S. corporate income tax rate

f = the foreign corporate income tax rate

wh = the foreign withholding tax rate on subsidiary dividends

r = the portion of the after-tax net income retained by the subsidiary

Equation 2 Model equation expressing the determination of the USTB under Alternative B–eliminate deferral but retain the foreign tax credit.

$$USTB = [tPBT - (fPBT + wh\ (1-f)\ (1-r)\ PBT)]/PBT$$

where: all symbols are as defined above

Equation 3 Model equation expressing the determination of the USTB under Alternative C–eliminate deferral and the foreign tax credit.

$$USTB = (t[PBT + wh\ (1-f)\ (1-r)PBT])/PBT$$

where: all symbols are as defined above

Equation 4 Model equation expressing the determination of the USTB under alternative D–eliminate deferral and the foreign tax credit but tax MNCs share of foreign subsidiary net income at low flat rate.

Same as equation 3 (the value of t would be smaller)

Equation 5 Model equation expressing current law where SubPart F income recognized exceeds amount distributed by the subsidiary to the MNC.

$$USTB = ((spf)\ tPBT - [(spf)\ fPBT + wh\ (1-f)\ (1-r)PBT])/PBT$$

where:

SPF = the percentage of the subsidiary's net income which is classified as SubPart F income.

Summary Analysis of Model Computations

Tables 1 and 2 present the results of computations of the USTB under current law and the alternatives to current law using the models presented above. A zero USTB indicates that no US income tax would be collected on the net income of the MNC foreign subsidiary.

The tables present the impact of the specified alternatives to current law considering foreign corporate tax rates of 0 percent, 20 percent, and 40 percent and dividend payout rates (1-reinvestment rate) of the foreign subsidiary varying from 25 percent to 100 percent. The foreign withholding rate is assumed to be 15 percent and the effective US tax rate imposed on the US parent corporation is assumed to 25 percent in Table 1 and 34 percent in Table 2 (except for Alternative D which uses a US tax rate of 10 percent). Also SubPart F income is assumed to be zero except for Alternative E which assumes SubPart F income to be 65 percent of the net income of the subsidiary.

An analysis of Tables 1 and 2 suggests that under current law, the USTB of the model foreign subsidiary is quite low in most instances and nonexistent in others. For example, if the US tax rate is 34 percent (Table 2), the only positive USTBs occur when foreign tax rates are 20 percent or less. This is true even in the case where most of the foreign subsidiary's net income is taxable under SubPart F of the Code.

Table 1. US Tax burden as a percentage of subsidiary net income

Foreign corp. tax rate	Foreign subsid. dividend payout rate	Current law "A"	No deferral "B"	No FTC no deferral "C"	C, except low flat Rate (10%) "D"	A, except subpart F Inc.>distr. "E"
Low (0%)	Low (25%)	2.5	21.25	24.06	9.63	12.50
Medium (20%)	Low	0	2.00	19.25	7.70	0.25
High (40%)	Low	0	0	14.44	5.78	0
Low	Medium (50%)	5.00	17.50	23.13	9.25	8.75
Medium	Medium	0	0	18.50	7.40	0
High	Medium	0	0	13.88	5.55	0
Low	High (75%)	7.50	13.75	22.19	8.88	NA
Medium	High	0	0	17.75	7.10	NA
High	High	0	0	13.31	5.33	NA
Low	Maximum (100%)	10.00	10.00	21.75	8.50	NA
Medium	Maximum	0	0	17.00	6.80	NA
High	Maximum	0	0	12.75	5.10	NA

Note: US tax rate = 25% (except for alternative D, 10%); subpart F income = 0 (except for alternative E, 65%) and foreign withholding rate = 15%.

Table 2. US Tax burden as a percentage of subsidiary net income

Foreign corp. tax rate	Foreign subsid. dividend payout rate	Current law "A"	No deferral "B"	No FTC no deferral "C"	C, except low flat Rate (10%) "D"	A, except subpart F Inc.>distr. "E"
Low (0%)	Low (25%)	4.75	30.25	32.73	9.63	18.35
Medium (20%)	Low	0.50	11.00	26.18	7.70	6.10
High (40%)	Low	0	0	19.64	5.78	0
Low	Medium (50%)	9.50	26.50	31.45	9.25	14.60
Medium	Medium	1.00	8.00	25.16	7.40	3.10
High	Medium	0	0	18.87	5.55	0
Low	High (75%)	14.25	22.75	30.18	8.88	NA
Medium	High	1.50	5.00	24.14	7.10	NA
High	High	0	0	18.11	5.33	NA
Low	Maximum (100%)	19.00	19.00	28.90	8.50	NA
Medium	Maximum	2.00	2.00	23.12	6.80	NA
High	Maximum	0	0	17.34	5.10	NA

Note: US tax rate = 34% (except for alternative D, 10%); subpart F income = 0 (except for alternative E, 65%); foreign withholding rate = 15%.

If deferral were eliminated, but not the foreign tax credit, the results suggest that MNCs with subsidiaries operating in countries that impose lower tax rates than the US would experience (especially those in countries imposing no tax) a sharply increased USTB if they pay little or no dividends. If deferral were eliminated, such MNCs may be inclined to take action to reduce the USTB on the affected foreign subsidiaries. For example, assume a subsidiary is operating in a country imposing a 20 percent tax rate and has a 25 percent dividend payout rate. If deferral were eliminated, the USTB on the subsidiary's net income would increase to 11 percent from 0.5 per cent (Table 2). However, that USTB could be reduced to 2 percent if the subsidiary increased its dividend payout rate to 100 percent. On the other hand, the USTB on subsidiaries operating in countries imposing a corporate tax rate equal to or greater than the US effective rate would not increase if deferral were eliminated. There would be no incentive for MNCs with such subsidiaries to undertake any tax-motivated action in response to the elimination of deferral. Overall, the results indicate that the elimination of deferral would not universally increase foreign subsidiary USTB as many critics of the proposal contend.

Tables 1 and 2 show that the net income of MNC foreign subsidiaries would consistently be subject to the highest USTB percentage if both deferral and the foreign tax credit were repealed. The USTB amounts would be sufficiently high to induce many MNCs to restructure or decontrol their controlled foreign subsidiaries to reduce the tax burden. However, the strategy of increasing dividend payout ratios would not significantly affect the USTB under this alternative.

Tables 1 and 2 indicate that the alternative, which would eliminate deferral and the foreign tax credit but would tax foreign subsidiary net income at a low flat rate, would produce a relatively stable, but moderate USTB. Under this alternative foreign subsidiary net income would be taxed at roughly the same low effective rate no matter what the foreign tax rate and dividend payout rate happen to be. The USTB percentages under this alternative are generally low enough relative to current law

(especially for subsidiaries with income subject to SubPart F of the Code) such that substantial behavioral changes on the part of MNCs in response to the enactment of such a proposal should not occur.

Finally an analysis of Tables 1 and 2 also indicates the relative impact of certain model variables on the USTB on subsidiary net income, as follows:

(1) The level of the foreign corporate income tax rate has a substantial impact on the level of the USTB. Consistently, the USTB is relatively low when the foreign corporate income tax rate is relatively high and vice versa. The impact of the foreign corporate income tax rate is least sensitive under the alternative D (eliminate deferral and the foreign tax credit and tax the subsidiary net income at a low flat rate).

(2) The US tax rate directly affects the USTB. The USTB is higher when the US rate is 34 percent than in the case when it is 25 percent.

(3) The dividend payout ratio produces a direct impact on the USTB under current law (Alternative A). The USTB increases under current law as the dividend payout ratio increases. This increase in USTB as the dividend payout ratio increases is due to the fact that a higher portion of the subsidiary net income becomes subject to US tax.

(4) Under current law, the USTB is increased when subsidiary net income becomes subject to taxation under SubPart F. The SubPart F rules do not affect the USTB under the three alternative proposals.

Hypotheses

Based on the information derived from the literature review and the results of the model computations, seven hypotheses concerning the USTB on MNC foreign subsidiary net income were developed. These hypotheses will be evaluated following the empirical analysis below. The seven hypotheses are as follows:

(H1) Under current law (which includes deferral and the foreign tax credit) relatively little or no US taxes are paid on the net income of MNC foreign subsidiaries.

(H2) The proposal to eliminate deferral, but retain the foreign tax credit would automatically raise the US tax burden of foreign subsidiaries.

(H3) The proposal to eliminate deferral and the foreign tax credit would impose a severe US tax burden on foreign subsidiaries.

(H4) The proposal to eliminate deferral and the foreign tax credit but use a low flat rate (e.g., 10 percent) would result in a relatively moderate and stable US tax burden.

(H5) The magnitude of the US tax burden is inversely related to the foreign corporate income tax rate imposed on the US foreign subsidiary.

(H6) The magnitude of the US tax burden is directly related to the US corporate income tax rat imposed on taxable income of the foreign subsidiary.

(H7) The SubPart F rules increase the US tax burden on foreign subsidiary net income under current law.

Aggregate Empirical Analysis

This section determines, analyzes and compares under present law and the three alternative proposals noted above, (1) the USTB on the net income of all MNC controlled foreign subsidiaries for the years 1972, 1976, 1980 and 1982 and (2) the USTB on the net income of MNC foreign subsidiaries on a geographic basis (i.e., for MNC subsidiaries incorporated in Canada, the United Kingdom, West Germany Panama, Brazil, and Switzerland – the countries in which MNC foreign subsidiaries had the six highest amounts of net income) for 1980 and 1982 (the only years for which sufficient information was available) and (3) as a result of the foregoing, the analysis evaluates the seven hypotheses stated above.

Table 3 presents an example of how the USTB figures were calculated. Table 3 shows the calculation of the USTB for all MNC controlled foreign subsidiaries for the year 1982 under (1) current law; (2) elimination of deferral with retention of the foreign tax credit; (3) elimination of deferral and the foreign tax credit; and (4) the low flat rate alternative.[2]

For each alternative the US taxes were calculated not only using the top marginal corporate rate of 1982 – 46 percent – but other rates as well, including 25 percent, 30 percent, 35 percent, and 40 percent. The other rates were included because few corporations actually paid the 46 percent rate. Rather, corporations effectively paid a lesser rate due to various tax breaks built into the system. For example, the overall corporate effective rate for 1982 was estimated to be 35 percent [Simenauer, 1986]. A study of effective rates by the Joint Committee [1984] for the year 1983 indicated that average effective rate for that year was 16.7 percent.

The taxable amount of foreign subsidiary net income subject to the applicable US tax rate and the USTB percentages were determined using the same computational process as show in the USTB models developed in the previous section.[3]

Table 4 presents the USTB on MNC foreign subsidiary net income overall for the years 1972, 1976, 1980, and 1982 using US tax rates of 25 percent, 35 percent, and the highest marginal rate in effect for the particular year (48 percent in 1972 and 1976 and 46 percent in 1980 and 1982).

Table 5 presents the USTB percentages for MNC foreign subsidiaries on a geographic basis. The USTB percentages were determined for each of the four alternatives for 1980 and 1982 at each of the US tax rates described above. Sufficient information to calculate the USTB percentages was available only for these two years.

Table 3. Determination of the US tax burden on the net income of controlled foreign subsidiaries in 1982 (dollar figures are in billions)

Current law					
Subsidiary net income before tax				$35.93150	
Foreign income taxes					
Foreign corporate income tax			$13.783720		
Foreign withholding taxes			$0.923879		
Income taxable under US law					
Dividends received before gross up			$10.833330		
Dividends gross up			$7.355179		
SubPart F income			$4.652083		
Total taxable income			$22.840590		
US income tax					
US tax rates					
25%	$5.710148				
30%		$6.852178			
35%			$7.994208		
40%				$9.136238	
46%					$10.50667
Foreign tax credit	$6.88077	$6.880477	$6.880477	$6.880477	$6.880477
Net US taxes	0	0	$1.113731	$2.255761	$3.626196
US tax burden	0	0	0.030995	0.062779	0.100919

Notes: US income tax = total taxable income multiplied by the applicable US tax rate.
Net US taxes = US income tax minus the foreign tax credit. A zero indicates no US tax would be collected.
US tax burden = net US taxes divided by subsidiary net income before tax.

Under alternative proposal of FTC. no deferral					
Foreign tax credit			$12.222305		
Subsidiary net income before tax and taxable income				$35.931500	
Foreign taxes paid					
Foreign corporate income tax				$13.783720	
Foreign withholding taxes				$0.923879	
Total foreign income taxes				$14.707600	
US income tax					
US tax rates					
25%	$8.982875				
30%		$10.77945			
35%			$12.57602		
40%				$14.372600	
46%					$16.528490
Foreign tax credit	$12.22305	$12.22305	$12.223050	$12.223050	$12.223050
Net US taxes	0	0	$0.352972	$2.149547	$4.305437
US tax burden	0	0	0.009823	0.059823	0.119823

Notes: US income taxes = taxable income multiplied by the applicable US tax rate.
Net US taxes = US income tax minus the foreign tax credit. A zero indicates no US tax would be collected.
US tax burden = net US taxes divided by subsidiary net income before tax.

Table 3. Continued

Under alternative proposal of no deferral, no FTC					
Subsidiary net income before tax			$35.981500		
Foreign taxes paid					
Foreign corporate income tax			$13.783720		
Foreign withholding taxes			$0.923879		
Total foreign income taxes			$14.707600		
Net foreign subsidiary taxable income			$21.223890		
US income tax					
US tax rates					
25%	$5.305972				
30%		$6.367167			
35%			$7.428361		
40%				$8.489556	
46%					$9.762990
US tax burden	0.147669	0.177202	0.206736	0.236270	0.271711

Notes: US income tax = net foreign subsidiary taxable income multiplied by the applicable US tax rate. US tax burden = US income tax divided by subsidiary net income before tax.

Under alternative proposal of no deferral, no FTC, but low flat rate		
Subsidiary net income before tax		$35.9815
Foreign taxes paid		
Foreign corporate income tax		$13.783720
Foreign withholding taxes		$0.923879
Total foreign income taxes		$14.707600
Net foreign subsidiary taxable income		$21.223890
US income tax		
US tax rates		
5%	$1.061194	
10%		$2.122389
US tax burden	0.029533	0.059067

Notes: US income tax = net foreign subsidiary taxable income multiplied by the applicable US tax rate. US tax burden = US income tax divided by subsidiary net income before tax.

Results of the Aggregate Empirical Analysis and Hypothesis Evaluation

The results of the empirical analysis indicated that the USTB under current law was generally positive (although not very large) when the US tax rate evaluated was the highest marginal rate in effect for the particular year. However, if the applicable US rate had been 35 percent or 25 percent, little or no US taxes would have been paid under current law. For example, as shown in Table 4, for MNC foreign subsidiaries overall, the USTB is positive at the highest applicable US marginal rate, but would

Table 4. US tax burden, all MNC foreign subsidiaries

	1972			1976			1980			1982		
Effective taxrate	25%	35%	48%	25%	35%	48%	25%	35%	46%	25%	35%	46%
Current law	0	0	0.40%	0	2.61%	7.58%	0	0	3.38%	0	3.10%	10.09%
No deferral, retain FTC	0	0	0.91%	1.52%	11.52%	24.52%	0	4.36%	15.36%	0%	0.98%	11.98%
No deferral, no FTC	13.41%	18.78%	25.76%	15.24%	21.34%	29.26%	15.77%	22.07%	29.01%	14.77%	20.67%	27.17%
No deferral, no FTC, use of low rate (10%)	5.37%	5.37%	5.37%	6.10%	6.10%	6.10%	6.31%	6.37%	6.37%	5.91%	5.91%	5.91%

Table 5. Geographic comparisons of the US tax burden

Country/Effective US tax rate	Current law		No deferral, FTC		No deferral, No FTC		No deferral No FTC, low rate	
	1980	1982	1980	1982	1980	1982	1980	1982
Canada								
35%	0	0	0	0	20.43%	20.99%	5.84%	6.00%
46%	0.70%	4.67%	8.54%	9,97%	26.85%	27.58%	5.84%	6.00%
United Kigndom								
35%	0	4.82%	3.50%	0	22.75%	20.41%	6.50%	5.83%
46%	0	11.51%	14.50%	8.48%	29.90%	26.82%	6.50%	5.83%
West Germany								
35%	0	0	0	0	17.00%	17.32%	4.86%	4.95%
46%	0	1.22%	0	0.55%	22.35%	22.77%	4.86%	4.95%
Panama								
35%	8.79%	14.08%	26.58%	23.19%	31.72%	30.41%	9.06%	8.69%
46%	15.51%	21.62%	37.58%	34.19%	41.70%	39.96%	9.06%	8.69%
Brazil								
35%	0	0	0	0	18.73%	20.18%	5.35%	5.76%
46%	0	0.54%	4.17%	7.88%	24.62%	26.51%	5.35%	5.76%
Switzerland								
35%	9.76%	14.70%	15.90%	15.54%	27.57%	27.43%	7.88%	7.84%
46%	17.18%	22.17%	26.90%	26.54%	36.23%	36.05%	7.88%	7.84%

have been zero at the 25 percent and 35 percent rates except in 1976 and 1982 (when it would have been close to three percent). Thus, the first and sixth hypotheses (H1 and H6) are accepted. Empirical evidence shows that under current law (which includes deferral and the foreign tax credit) relatively little or no US taxes are paid, and the US tax burden varies directly with the US tax rate imposed on the foreign subsidiary taxable income.

The USTB that would have resulted had the "no deferral, but retain foreign tax credit" alternative been in effect would have been generally (but not always) higher than that under current law. For example, as shown in Table 4, in 1982 the USTB at the 35 percent US rate under the no deferral, but retain foreign tax credit alternative would have been lower than that under current law. Since instances were found where the USTB percentages would have been lower for this alternative than under current law, there is no certainty that eliminating deferral would automatically raise the tax burden of foreign subsidiaries overall as many critics of the proposal to end deferral contend. Thus, the second hypothesis (H2) is rejected.

The results show that if both deferral and the foreign tax credit were eliminated, the USTB on MNC foreign subsidiary net income would be significantly higher than under current law and the other alternatives in all cases. Thus, the third hypothesis (H3) is accepted. The adoption of this alternative would impose a severe tax burden (combined foreign and US) on MNCs that operate foreign subsidiaries.

However, the alternative that would eliminate deferral and the foreign tax credit but would separately tax MNCs on their share of foreign subsidiary net income at a low flat rate such as 10 percent, would impose a very moderate and stable USTB on such income. Under that alternative, MNCs would typically experience a USTB in roughly the 6–7 percent range. That is not a particularly onerous burden considering that it is smaller than that experienced under current law in some circumstances. For example, as shown in Table 5, the USTB under the low flat rate alternative would have been lower than that under current law for MNCs with subsidiaries incorporated in Panama and Switzerland, Consequently, the fourth hypothesis (H4) is accepted. Elimination of deferral and the foreign tax credit and use of a low flat rate (e.g., 10 percent) results in a relatively moderate and stable US tax burden.

The empirical results consistently showed that under current law and the three alternative proposals, the USTB is relatively high when the foreign corporate income tax rate is low and vice versa. For example, as shown in Table 5, a dramatic difference exists between the USTB percentages of foreign subsidiaries operating in Panama (which levied an average corporate income tax rate of 12.9 percent and practically no withholding taxes in 1982) and those in West Germany (which levied a corporate rate of 31.4 percent and an average withholding rate on dividends of over 13 percent). Thus, the fifth hypothesis, H5, is accepted. The magnitude of the USTB is inversely related to the foreign corporate tax rate imposed on foreign subsidiary net income.

The results also indicate that magnitude of the USTB under current law is directly related to the amount of subsidiary net income taxable under the SubPart F provisions. For example, Table 5 shows that MNC foreign subsidiaries incorporated in Panama and Switzerland had the highest USTBs under current law. Those subsidiaries have a higher amount of income subject to SubPart F than subsidiaries operating in the other countries. Thus, the seventh hypothesis, H7, is accepted.

Conclusions

This study has analyzed the US tax burden (USTB) on the net income of foreign subsidiaries of US multinational corporations under current law which is characterized by the deferral and the foreign tax credit and the following three alternatives:

(1) eliminate deferral, but retain the foreign tax credit;

(2) eliminate deferral and the foreign tax credit and allow a deduction for foreign taxes paid;

(3) eliminate deferral and the foreign tax credit but tax US shareholders on their share of foreign subsidiary net income at a low, flat rate (i.e., 10 percent).

The study analyzed the USTB of MNC foreign subsidiaries as follows: (1) for a hypothetical subsidiary through computational analysis using an analytical model for calculating the USTB; and (2) from an aggregate empirical standpoint (based on overall information published by the IRS for the years 1972, 1976, 1980, and 1982). Seven hypotheses were formulated after the simulation analysis. These were evaluated at the end of the empirical analysis.

A number of overall conclusions can be drawn. They are:

(1) The USTB on foreign subsidiary net income under current law is, in general, quite nominal and in many cases, nonexistent. The USTB under current law is substantial for subsidiaries that have large amounts of SubPart F income and that are subject to little or no foreign income taxes. For example, the aggregate analysis showed that the USTB of subsidiaries incorporated in Panama (which levies a low rate rate) was relatively high compared to the USTB of subsidiaries in West Germany (which levies a relatively high rate).

(2) The USTB on foreign subsidiary net income under the alternative which would eliminate deferral but retain the foreign tax credit would sometimes, but not always, be higher than that under current law. In fact, it was shown that the USTB under this alternative would also be quite nominal or nonexistent in many instances (especially in cases where the subsidiary is subject to a high foreign income tax rate). In some instances it was found that the no deferral and retain foreign tax credit alternative would produce a lower USTB than under current law. Thus, if deferral were eliminated, but not the foreign tax credit, the USTB of foreign subsidiaries would not dramatically increase as some critics of the proposal claim. Since this alternative would simplify the tax law because it would result in the repeal of SubPart F, it should be given renewed consideration in Congress.

(3) If deferral and the foreign tax credit were eliminated and foreign taxes were only permitted as a deduction, the USTB on MNC foreign subsidiary income would increase dramatically, in general, and would be quite high, Consistently, this alternative would produce the highest USTB. If this alternative were enacted, US multinational corporations would be placed at a substantial disadvantage compared to their overseas counterparts, and the incentive to invest overseas would be significantly decreased. The enactment of this alternative would probably

induce MNCs to decontrol their controlled foreign subsidiaries and/or take other restructuring moves to limit their US tax burden. Thus, this alternative should not be seriously considered for adoption.

(4) If deferral and the foreign tax credit were eliminated and foreign subsidiary net income were taxed separately at a low flat rate to US parent corporations, the USTB on foreign subsidiary net income would be generally nominal and fairly stable. In this study, it was found that the USTB under this alternative would be between 5 and 9 percent and typically would be around 6 or 7 percent for specific subsidiaries. Significantly, the USTB under this alternative is not very sensitive to such factors as foreign tax rates and dividend payout ratios. It would thus produce a fairly predictable, but not onerous USTB on foreign subsidiary net income. Enactment of this alternative could eliminate much of the complexity associated with current law (i.e., by the repeal of SubPart F and the complex foreign tax credit) and yet could provide similar or slightly larger amounts of revenue (based on a 10 percent tax rate) to the US Treasury. The enactment of the low flat-rate alternative would probably not raise the US tax burden to an extent that would cause MNCs to substantially alter existing business practices.

Overall, this study provides information that should be useful to policymakers in considering future changes in the tax law applicable to foreign subsidiary net income. This study has shown that there are alternatives to current law that could simplify the US tax rules relating to MNC foreign subsidiary net income and produce similar amounts of federal tax revenue. By reducing complexity, the tax system would no longer be the substantial impediment to international trade that it now is. The low, flat rate alternative, that would result in the repeal of both SubPart F and the foreign tax credit, is the alternative that provides the greatest simplicity while generating tax revenue in amounts comparable to that derived under current law.

Appendix

Computations for Alternative A: Currency Law

Profit before tax	$20.00	PBT
Foreign income tax	$4.00	FT = f*PBT
Profits available for dividends	$16.00	PAD =PBT – FT = (1–f)PBT
Reinvested earnings	$8.00	RE = r*PAD = r(1–f))PBT
Actual div to parent	$8.00	AD = PAD-RE = (1–f)(1–r)PBT
Foreign withholding tax	$1.20	FWH = wh*AD = wh(1–f)(1–r)PBT
Profit remitted to USA	$6.80	PUS = AD - FWH = (1–wh)(1–f)(1–r)PBT
Net US tax on foreign source income	0	NUST = (1–r)PBT(t–wh(1–f)–f)
US tax burden on sub net income	0	USTB = NUST/PBT = [(1–r)PBT(t–wh(1–f)–f)]/PBT

Computations for Alternative B: No Deferral

Profit before tax	$20.00	PBT
Foreign income tax	$4.00	FT = f*PBT
Profits available for dividends	$16.00	PAD = PBT–FT = (1–f)PBT
Reinvested earnings	$8.00	RE = r*PAD = r(1–f)PBT
Actual div to parent	$8.00	AD = PAD–RE = (1–f)(1–r)PBT
Foreign withholding tax	$1.20	FWH = wh*AD =wh(1–f)(1–r)PBT
Profit remitted to USA	$6.80	PUS = AD–FWH = (1–wh)(1–f)(1–r)PBT
Net US tax on foreign source income	0	NUST = [tPBT–(fPBT+wh(1–f)(1–r)PBT]
US tax burden on sub net income	0	USTB = NUST/PBT =[tPBT–[fPBT+wh(1–f)(1–r)PBT]]/PBT

Computations for Alternative C: No Deferral and No FTC, Foreign Taxes as Deduction Only

Profit before tax	$20.00	PBT
Foreign income tax	$4.00	FT = f*PBT
Profits available for dividends	$16.00	PAD = PBT–FT = (1–f)PBT
Reinvested earnings	$8.00	RE = r*PAD = r(1–f)PBT
Actual div to parent	$8.00	AD = PAD–RE = (1–f)(1–r)PBT
Foreign withholding tax	$1.20	FWH = wh*AD = wh(1–f)(1–r)PBT
Profit remitted to USA	$6.80	PUS = AD–FWH = (1–wh)(1–f)(1–r)PBT
Net US tax on foreign source income	$3.70	NUST = t[PBT–[fPBT+wh(1–f)(1–r)PBT]]
US tax burden on sub net income	18.5%	USTB = NUST/PBT = t[PBT–[fPBT+wh(1–f)(1–r)PBT]]/PBT

Computations for Alternative D: No Deferral and No FTC, Foreign Taxes as Deduction Only, Low U.S. Corporate Tax Rate (10%)

Profit before tax	$20.00	PBT
Foreign income tax	$4.00	FT = f*PBT
Profits available for dividends	$16.00	PAD = PBT–FT = (1–f)PBT
Reinvested earnings	$8.00	RE = r*PAD = r(1–f)PBT
Actual div to parent	$8.00	AD = PAD–RE = (1–f)(1–r)PBT
Foreign withholding tax	$1.20	FWH = wh*AD = wh(1–f)(1–r)PBT
Profit remitted to USA	$6.80	PUS = AD–FWH = (1–wh)(1–f)(1–r)PBT
Net US tax on foreign source income	$1.40	NUST = t[PBT–[fPBT+wh(1–f)(1–r)PBT]]
US tax burden on sub net income	7.40%	USTB = NUST/PBT = t[PBT–[fPBT+wh(1–f)(1–r)PBT]]/PBT

Computations for Alternative E: Current Law Where SubPart F Income Exceeds Distribution (65% to 50%)

Profit before tax	$20.00	PBT
Foreign income tax	$4.00	FT = f*PBT
Profits available for dividends	$16.00	PAD = PBT–FT = (1–f)PBT
Reinvested earnings	$8.00	RE = r*PAD = r(1–f)PBT
Actual div to parent	$8.00	AD = PAD–RE = (1–f)(1–r)PBT
Foreign withholding tax	$1.20	FWH = wh*AD = wh(1–f)(1–r)PBT
Profit remitted to USA	$6.80	PUS = AD–FWH = (1–wh)(1–f)(1–r)PBT
US tax on foreign sub profit	$3.25	UST = (spf)tPBT
Foreign tax credit	$3.80	FTC = (spf)fPBT+wh(1–f)(1–r)PBT]
Net US tax on foreign source income	0	NUST = (spf)tPBT–[(spf)fPBT+wh(1–f)(1–r)PBT]
US tax burden on sub net income	0	USTB = NUST/PBT = ((spf)tPBT–[(spf)fPBT+wh(1–f)(1–r)PBT])/PBT

Note: Computations are based on the following values: PBT, $20.00; f, 20.00% foreign tax rate; r, 50.00% reinvestment rate; wh, 15.00% foreign withholding rate; t, 25.00% US corp. tax rate (10.00% for Alternative D); spf, 0.00% subpart F income (65% for Alternative E).

Notes

1. The complexity of SubPart F was exemplified by Bagley's doctoral dissertation [1970]. The dissertation exhaustively analyzed SubPart F in over 400 typewritten pages containing numerous detailed flowcharts.
2. The information used to determine the USTB percentages was taken from, and in some cases, derived from, statistical data published by the US government in the following sources: (1) Joint Committee on Internal Revenue [1975]; (2) the US Treasury Department [1982]; (3) Gianelos and Sutton [1984]; States [Summer 1984]; States [Winter, 1984–1985]; Barlow [1986]; Carson [1986]; Skelly and Hobbs [1986]; and States [1986].
3. The foreign tax credit under current law is based on the foreign corporate income taxes attributable to the taxable portion of foreign subsidiary profits (i.e., dividends paid to the MNC out of earnings and profits and SubPart F income) and foreign withholding taxes and was derived from IRS statistics. The foreign tax credit under the "eliminate deferral, but retain foreign tax credit" method is (1) the total of the foreign corporate income taxes and foreign withholding taxes paid that are attributable to the subsidiary net income that is taxed to the US MBF parent multiplied by (2) a percentage that is equal to the ratio of the foreign tax credit taken to the foreign taxes available for credit of US corporations during the particular year.

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Management Accounting in China: A Current Evaluation

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Key words: China; Economic conditions; Management accounting; Socialist accounting

Abstract: *China's economic reform program, which commenced a decade ago, brought great changes to nearly all aspects of Chinese economic and management systems. This paper reviews the recent developments in Chinese enterprise accounting generally and in the area of management accounting specifically, in the wider context of the management systems of State enterprises. The general trend of the future development of Chinese management accounting is also considered.*

While management accounting has existed in the west for decades, the term was not known in China until the late 1970s. Although many of the concerns of western management accounting were addressed in China, especially in the area of budgeting and control, many of the approaches used in western management accounting and some of its concepts were unknown. Moreover, the traditional macroeconomic orientation of Chinese accounting meant that accounting information lacked relevance for managerial planning and control at the enterprise level. Many Chinese efforts in the area labelled management accounting in the west were not generally regarded as constituting part of accounting in China.

This situation is not surprising as before 1978 China had a highly centralized political-economic system and had isolated herself from the rest of the World for nearly 30 years. Since 1978, however, profound changes have taken place in the political, economic, and social life in China, In the area of enterprise management, a series of schemes were introduced to seek to motivate and vivify the State enterprises by granting management autonomy and reducing the interference of superior

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administrative authorities and of the Party organization within the enterprise. Limited market mechanisms have entered the economy and are playing a more and more important role in regulating the economy, though state planning remains and still dominates some sectors.[1]

These changes have been matched by the gradual transformation of accounting systems, which mainly served for macroeconomic planning and control during the pre-reform period.

The theme of the transformation of the Chinese accounting system has coincided with general economic reforms seeking to develop new decision-making functions at the enterprise level and to loosen centralized control. The 'open door' policy declared by the Chinese government in 1978 encouraged the importation from the west of management techniques and brought western management accounting into China. The changes in the Chinese enterprise accounting system have since been linked to the spread and application of western management accounting. As we can see from the description and analysis in the later part of this paper, the recent efforts to develop Chinese management accounting could be regarded as causing a fundamental change in the Chinese accounting system as well as being the ultimate result of the spread of western management accounting.

Western Management Accounting in China

Western management theories and techniques were regarded in China as part of the capitalist ideology and were, therefore, treated with caution by Chinese academics and practitioners, especially during the Cultural Revolution. In the later years of the 1970s, profound theoretical debates occurred in China and were encouraged by the new leaders. In the sphere of economics, the character and objectives of the socialist economy were discussed. In dialectics, the successful application of theory in practice was reaffirmed as the only criterion for the truth. The positive result of the debates, in terms of ideological or sociological tolerance, made possible the importation of western management techniques. At that stage, the reformers made great use as the argument for reform the late leader Mao's saying that 'We must firmly reject and criticise all the decadent bourgeois systems, ideologies and ways of life of foreign countries. But this should in no way prevent us from learning the advanced sciences and technologies of capitalist countries and whatever is scientific in the management of their enterprises.[2] Thus, accounting techniques, especially those of management accounting began, under this philosophy, to be transferred from the west to China in the late 1970s, as they were regarded as 'a necessary subject of management know-how' and because of their perceived technical nature.[3]

The Rapid Spread of Western Management Accounting

The first channel for this transfer was the publication in Chinese of selected accounting methods, primarily from American textbooks and journals.[4] More than 10 Chinese translations of western books and Chinese books based on western accounting were published by the end of 1981.[5] Education was another important way of spreading

Table 1. Respondents who had some acquaintance with management accounting methods[7]

Methods	Number	% of total (21)
Cost-volume-profit analysis	18	85.7
Standard costing	12	57.1
Responsibility accounting	9	42.9
Budgeting	3	14.3

these methods. Training programs and seminars were initiated; foreign academics were recruited to conduct lectures; management accounting entered the syllabus of institutions of higher education and various professional training programs as a separate subject and attracted considerable interest from the students and trainees.[6]

These initial efforts, mainly by academics, produced remarkable results in publicizing the basic techniques of western management accounting to a large number of the huge Chinese accounting population in just a couple of years. According to a questionnaire survey (1981) addressed to the participants of an advanced professional training class, most had learned something of western management accounting even before they attended the class (18 of 21 respondents). More details are given in Table 1 which shows the number and percentage of the respondents who had some acquaintance with a number of management accounting methods prior to the course.

The Role of Theory in Popularizing Western Management Accounting

The spread of some techniques of western management accounting did not seem to render them theoretically acceptable or generate their practical application. This was because, perhaps, somewhat surprisingly from a western perspective, the philosophical view in China required theoretical and political justification of these techniques before they could be applied. Precisely, whether or not China needs management accounting and whether western management accounting would suit the Chinese environment were the two questions to be answered in providing such justification.

The reorganization of the Accounting Society of China in 1980 made possible organized and systematic research into accounting to help solve the emerging problems accountants faced in the new economic environment. This Society was originally formed in the 1950s but suspended during the Cultural Revolution. Despite its academic nature, it is very influential owing to its close link to Ministry of Finance, the ultimate authority for the accounting profession in China. Its reconstitution facilitated achieving the necessary theoretical justification for management accounting and greatly contributed to the further popularization of this subject. More training programs were organized by local and industrial accounting associations and more information was disseminated in over 60 journals on accounting and finance published by these associations.[8] Most importantly, academics and practitioners found a common forum in these journals to evolve the theoretical justification of management accounting by exchanging their ideas.

The question concerning China's need for management accounting was answered by the argument, which did not evoke much controversy, that management accounting, originating from the requirement for effective control and organization of modern mass production, should not be unique to the capitalist economies because a socialist economy is also characterized by socialized mass production which requires scientific management. It therefore equally needs management accounting.[9] This view found acceptability among Chinese academics, who had been trying to explain the existence of accounting in general in a socialist economy using the similar argument.

In contrast with the nearly unanimous endorsement of the above argument, the debate over the problem of the suitability of western management counting to China was lively and showed great diversity of opinion. The major concern was whether the profit maximizing assumption could apply to Chinese enterprises. The debate concerning the objectives of the socialist economy and of state enterprises in Chinese economics circles around 1980 helped accounting academics find an answer, which, however, remains questionable to some commentators. Pro-reform economists claim that clearly defining profit as a primary objective of enterprises could motivate enterprises to utilize resources more efficiently and coincides with the general requirements of market-oriented reforms.

In practice, a number of profit-sharing schemes, which sought to motivate enterprise by encouraging the interest of the enterprise and its employees in the profits it generated, were introduced in succession starting in 1979. These schemes were quite complex and retained substantial elements of central planning (for example, the use of targets). The continued alterations to these schemes and their variety acted to dilute the motivational effects of profit. They did prove highly effective, however, in changing the goals of enterprises. According to statistics derived from 359 recent questionnaires addressed to factory directors, 'improvement of efficiency and benefit' topped the list of 14 management objectives, whereas 'fulfilment of production quotas', which had been of the first importance, came eleventh.[10] This tremendous change in perspective provided a sound solution to the theoretical problem concerning the assumption of profit maximizing, and therefore helped to give the 'go ahead' to the application of western management accounting techniques.

Implementation of Western Management Accounting

Practitioners actually began to use some western management accounting techniques in their work from the beginning of 1980s to meet the new decision-making role required of accounting by management. In some enterprises, a new division dealing with routine management accounting was created within the accounting/finance department. In others, a new office under the enterprise director usually called the 'management office' or the 'office for management analysis' was established, in which the chief accountant has many opportunities to use knowledge of management accounting to assist the top decision-maker. The different arrangements granted different degrees of power to accountants, reflecting the varied importance given to management accounting in different enterprises. These different arrangements by the enterprises may signal to some extent the degree of exposure of different types of enterprises to the market.[11]

Table 2. Perceived practical value of methods of management accounting: Two surveys[12]

Methods	Respondents who thought the method was useful		Respondents who did not think it was useful	
	Number	% of total (81)	Number	% of total (81)
CVP analysis	64	79.0	0	0
Responsibility accounting	44	54.3	2	2.5
Standard costing	31	38.3	1	1.2
Capital budgeting	24	29.6	13	16.1
Operational budgeting	3	3.7	11	13.6

Different methods of western management accounting received varying degrees of favor from Chinese practitioners according to the 'practical value' they were perceived to have by the Chinese. According to two surveys conducted in 1981 in which the respondents were all accountants employed in enterprises (Table 2), cost-volume-profit analysis (including short-term decision-making analysis) and responsibility accounting were the most favored techniques in the Chinese context, while operational budgeting and techniques involving advanced quantitative analysis, such as economic order quantity analysis and regression analysis, were considered of little practical value and unsuitable to the Chinese situation at the time.[13] This result is, in general, comparable to the results of similar western studies, which suggest, for example, that 'some simple quantitative techniques are used by companies in the USA and UK, but that there is rather limited use of the more complex techniques.'[14]

Ready Acceptance of Contribution Analysis

Cost-volume-profit (CVP) analysis was of special interest to both academics and practitioners in China because of its ability to link target profit with operational planning. Following successful trial implementations of this approach, a number of Chinese accountants claimed that by using contribution margin analysis and CVP analysis they could provide management with valuable suggestions for increasing profit, which had become an important management objective.[15] In contrast, when the price of a product is lower than its full cost, the view that "the higher the volume, the greater the loss" was previously taken for granted by many Chinese accountants and managers. The concept of contribution margin thus provided new perspectives on many operational problems.[16] It was therefore not long before these techniques were extensively used in management analysis in almost all large and medium sized enterprises.[17]

The acceptance of contribution analysis seemed less problematic than in the west and was relatively widely used in China, at least at the time of the above surveys. There seem to be two possible reasons for the ready acceptance of these approaches in China. The Chinese economic environment in the early 1980s seems similar to that which was said to have obtained in the west when these techniques emerged in 1950s–1960s, when it was argued that increased fixed cost and the operation at

capacity were pressing problems for many manufacturing undertakings.[18] Many of the environmental conditions which have challenged the use of these techniques in the west, such as uncertainty, and rapid changes of production techniques have not yet arisen for most Chinese industries or firms. There is also reason to believe that initially most Chinese practitioners were too busy learning the techniques to consider them very critically. Some criticisms of contribution analysis and variable costing have been heard in more recent years.

Replacement or Improvement?

In the control area, there did exist what the Chinese regarded as 'the Chinese traditional responsibility accounting' comprised of internal business accounting (IBA), and normative costing, a type of standard costing borrowed from the USSR in the 1950s. Despite this, as can be seen from Table 2, western responsibility accounting and standard costing attracted considerable interest from Chinese accountants. The general view was that as the operational methods used by Chinese enterprises become more comparable with those of their western counterparts, it would be necessary to improve existing methods by absorbing western ideas (this was the case in the control area).

The IBA system was popular in the early 1960s, the late 1970s and the early 1980s when what was called the Internal Economic Responsibility System was in full swing. This responsibility system was designed to 'fire workers' enthusiasm' and therefore to assure the fulfilment of state-assigned tasks. This system sought to break down the overall responsibilities undertaken by the enterprise into segments, to assign them to various internal units for fulfilment, so as to link the responsibilities shouldered by a unit and its performance to material and non-material (moral) incentives. Many of the ideas and approaches employed in the IBA system bear considerable similarity to those familiar in western responsibility accounting (RA). Some examples are the idea of divisional control based on the organizational structure (the Chinese equivalent of a western cost 'centre' is the 'unit'), the assignment of plans to units (the Chinese technique of what is called target break-down is similar to western responsibility budgeting), performance measurement devices, and the performance-based incentive systems (though moral incentives used to be important in China). However, the differences between IBA and western responsibility accounting should not be ignored. The difference in the general goal that enterprises under the two systems sought to achieve (quantitative output for Chinese firms in contrast with profit in the west) meant that the focus of attention and the concrete techniques used in each step of the control process differed in the two types of economies. Furthermore, cultural factors seem to be important in control area. Performance measures and incentive devices within Chinese enterprises under IBA, for instance, were designed in accordance with the belief that no individual can perform outstandingly without the efforts of his subordinates and colleagues. They were therefore basically group- or unit-oriented, which contrasted with the individual-orientation of western accounting controls.

The similarities between the techniques used in China and those in the west could arguably be traced to the origin of the Chinese techniques, which were originally adapted from the USSR in the early 1950s which had imported these methods from

the west earlier.[19] It seems obvious, however, that such early imports from western cost accounting and control have been substantially supplemented by Soviet and Chinese developments which did not evolve in the same way as in the west and were conditioned by central planning and control and by cultural factors.

Western responsibility accounting highlighted the deficiencies of IBA in the more market-oriented environment. But IBA was not replaced by the responsibility accounting. Instead, what Chinese have been trying to do is to retain the IBA and improve it by assimilating and incorporating into it western ideas and and techniques. This could perhaps be attributed to the Chinese wish to retain their long-used approaches which are thought to be adaptable to the Chinese situation, and because some measures employed in IBA were considered to effective in the new environment and to reflect specific Chinese requirements and ideas. Examples of these measures include multi-criteria performance measures,[20] the three-level accounting system,[21] and an incentive system combining monetary incentives with moral incentives. The defects attached to the IBA system did allow its improvement, by adopting the concept of controllability and the techniques of variance analysis and transfer pricing.[22] Since 1981, the most discussed accounting problem in China has been how to establish a new Chinese responsibility accounting system combining Chinese and western systems.

Compared with the IBA system, the normative costing system suffered more criticisms, many of which had been heard prior to the introduction of western standard costing. Normative costing was designed mainly for the purpose of cost determination rather than that of cost control. In principle, normative costs are predetermined costs based on technical norms, such as, material consumption norms. They should therefore be changed frequently as technology changes so as to reflect the 'updated and advanced' level of cost. In addition, the cost classification used in normative costing coincided with that used in actual product costing, which did not distinguish between variable and fixed costs. Therefore, there was no ability to make comparisons between norm and actual costs in terms of areas of managerial responsibility.[23] It was argued that the normative costing system's retrospective approach, the variability of its norms, and its neglect of cost behavior greatly restricted its use in cost control.[24] Some commentators therefore propose the replacement of the system by standard costing, as has been done in some enterprises. Other authors seek to retain and protect normative costing by stressing the similarities between the two systems[25] and by stressing its ability to combine cost determination and cost control. The future for the normative costing is as yet uncertain.

Indifference Towards Western Budgeting Methods

Most of the Chinese accountants surveyed were indifferent towards operational budgeting, because western budgeting methods are very similar to the production and financial planning system already used in Chinese enterprises. The only real difference between the two systems at a technical level is that the budgeting process in the West begins with the sales budget whereas the traditional Chinese planning process began with production plans. This difference is understandable because prior to reforms discussed above, Chinese State enterprises were essentially production

units subordinated to an industrial ministry or administrative corporation, with a status analogous to that of a cost center within a western independent firm. Since 1979, however, reflecting the enterprises' increased autonomy, the sales plan has also become starting point of the planning process in Chinese firms. However, in many Chinese enterprises, accountants were responsible only for fund, cost, and profit planning, while sale and production planning was the responsibility of the Planning Department. This separation of planning function has been eliminated by constituting a new 'management office' or the like in some firms in recent years. But many accountants seem to regards sales or production planning as 'not my job', and therefore pay little attention to western budgeting techniques.

Diversified Attitudes to Investment Appraised Techniques

The authority for investment decision-making had always in the past been monopolized by higher authority. Moreover, the criteria used to appraise projects were often the need for productive capacity and non-economic criteria. The investment appraisal technique used, if any, was only the payback period. The concepts of the time-value of money and of capital cost, discounting techniques, and risk premia did not seem to be known or, at least, were not used by, the Chinese decision-makers at high levels or accountants working in enterprises. Enterprise management and accountants did not pay much attention to these western approaches to investment appraisal until 1983 when the 'tax-for-profit' scheme entrusted enterprises with some power to use profit after tax in productive investment. The close link this engendered between the financial results of an investment and the interests of the enterprise means that management became increasingly concerned with the financial results of investments. In this sense western DCF techniques have a potentially wide application in Chinese enterprises. The present application of these techniques is, however, still substantially restricted by the environment in which enterprises operate. For example, despite its positive role in motivating enterprises to generate more profits, the widely adopted contract system has lead firms to pursue short-term interests and to neglect long-term investment,[26] phenomena not unfamiliar in the west. Furthermore, other factors such as availability of physical assets and electricity, State capital rationing of investment funds often become crucial and dominant considerations in appraising the feasibility of a project. This situation suggests that Chinese State enterprises are still subject, especially in strategic areas, to State control and to a number of external constraints, and have basically semi-independent status.

Accounting and Management: Current State of Management Accounting in China

Developing the decision-making function of accounting has been an inexorable trend since the pattern of enterprise operations and management began to change a decade ago. Direct importation of the techniques of western management accounting helped to meet management's demand for accounting information in the early stage of

economic reforms prior to 1984 when the traditional accounting systems remained dominant in both practical and academic fields. As reforms went further, conflict arose between traditional accounting thought and the traditional accounting system, and the new ideas and techniques, which were introduced to develop the micro-management functions of accounting. Resolving this conflict was seen as necessitating a radical change in both concepts and in practical systems of accounting, especially of enterprise accounting. This process resulted in a major reconstruction in both accounting theory and practice beginning around about 1984.

The Shift of Emphasis

Seeking to link closely accounting with enterprise management has been the major theme of this reconstruction. The heart of enterprise accounting reform was argued to be the redirection of attention from merely book-keeping to participating in managerial decision-making and control, changing from retrospective reporting to prospective forecasting, the use of feedback control and providing analysis on a timely base, and the shift of emphasis from serving the needs of state control to assisting and advising the enterprise's top decision-maker.[27] Many authors hold that the establishment of a new responsibility accounting system is the kernel of any desired accounting reform because only when a new enterprise accounting system which directly serves management is created can the nature and functions of accounting be actually changed and the objective of accounting reform be eventually achieved.[28] In practice, a new responsibility accounting system based on a combination of the former internal business accounting (IBA) and the western system has been introduced in a number of enterprises. This system retains the IBA's organizational framework and some of its techniques, such as the use of an internal bank[29] and management by objectives which were previously used in IBA. It also incorporates most of the concepts and techniques used in western responsibility accounting, except those concerning investment centres.

Separate Management Accounting System

Organizationally, a new enterprise accounting system embodying both financial accounting and management accounting has been proposed. Many people are agreed that this system might be constructed according to the western model, while others insist that socialist accounting should differ from capitalist accounting both in nature and in form. In recent years, a 'new' proposal has been suggested and has met with some acceptance. Here, it is suggested that a separate responsibility accounting system should be created instead of being included in management accounting. The proposed system would therefore consist of three parts or subsystems: accounting for external reporting, accounting for management decisions, and internal responsibility accounting.[30] It is also argued that a separate responsibility accounting system should be established because the IBA system was somewhat independent from the formal macro-oriented accounting system, and because the ad hoc nature of the decision-oriented part of accounting renders it distinct from the other two more routine-based systems. Meanwhile, a debate concerning the organic unification or separation of

the two major components of the accounting system (financial accounting and management accounting) has also been proceeding. In practice, separate sections dealing with financial accounting and management accounting were created or re-established within accounting departments in some enterprises. This practice 'has since been sanctioned by authoritative practitioners when it was officially announced by the State Economic Commission that two accounting systems, one for management accounting and one for financial accounting, should be gradually implemented' in enterprises starting in 1987.[31]

Advances in Costing

Changes of concepts and ideas were seen as a prerequisite to successful practical application of management accounting techniques in China. Some commentators believe that western management accounting not only provided some new methods and techniques, but more significantly provided new concepts and ideas which help Chinese accountants to understand accounting from a new perspective.[32] Changes in cost concepts have been especially important. For instance, the phrase 'different costs for different purposes' has smashed the bonds of the previously prevailing Chinese idea of an unique concept of cost, resulting in a variety of cost concepts being accepted. It was argued in China that concepts of managerial cost should be developed while the traditional concept of cost might be retained by being redefined as financial cost for financial reporting.[33] A framework for managerial costs was proposed as in Table 3.

Despite the debate on unification or separation of financial accounting and management accounting, and contrary to western ideas, most academics and practitioners do believe that it is necessary, as well as possible, to integrate the different costing subsystems, concerned with costs for decision, costs for control and costs for financial reporting, into one. This is held to be necessary because it would be costly and could cause confusion and conflict to maintain two or more separate costing systems. This unification is believed to be possible because all the basic types of costs, except those which need special recording or collecting, can be drawn from the same data source. Several designs for such a system have been proposed. The most popular suggested approach has been to create a unitary multi-purpose costing system based on what might be called a standard variable costing system, which is designed to provide information concerning product variable cost, full cost, and responsibility

Table 3. Managerial cost concepts[34]

Costs for management decision	Costs for management control	Costs for technoeconomy[35]
Variable cost	Controllable cost	Design cost
Fixed cost	Responsibility cost	Function cost
Incremental cost	Standard cost	Quality cost
Opportunity cost	target cost	Life-cycle cost
Replacement cost	Specific cost	
Sunk cost		
Cost of capital		

cost, by using a specially designed account classification or network and working sheets.[36] In the Chinese context, this design could be easily accepted and practicable. Some enterprises have begun to try this proposed system but the results are still unknown.

Chinese Version of Management Accounting

As more and more western books and journals became available in China and as Chinese students and academics went abroad, 'advanced management accounting', which might be said to have developed in the west since the 1970s[37], has become known to Chinese accounting academics. This type of management accounting has found a place in China in academic journals, some newly-published textbooks and syllabi for postgraduate students at some universities. At least some of these' advanced' techniques and new ideas, such as information economics and agency theory, seem, as yet, to be beyond the comprehension of most practitioners and even of some academics in China. A number of Chinese accountants have, therefore, advanced the view that it was necessary to 'think more seriously of western management accounting'[38] and to consider developing 'a Chinese version of management accounting'.[39] A nation-wide discussion concerning this matter was held in approximately 1985. *Guangdong Caikuai* (Canton Accounting), a local professional journal, for example, launched a discussion in 1985. During this 3 year (1985–1987) discussion, 38 articles were published in this journal with comments from almost all levels of the accounting community. The main points raised in the discussion are summarized below.

Learning from Rather than Copying the Western System

One view was that Chinese management accounting should not indiscriminately copy the western version although it was accepted that it was necessary initially to introduce both comprehensively and accurately into Chinese accounting knowledge the western version of management accounting, when learning and assimilating were the main concerns. It was, however, argued that in the long run, it may not be practical or sensible to simply copy or imitate the western system of management accounting. Because management accounting, as accounting in general, is seen in China not just as a set of techniques and methods but a theoretical system and a set of approaches in which socioeconomic, cultural and ideological factors may play an important role. The impact of these factors on management accounting can be seen in the way they impact on general management. Decision-makers in Chinese enterprises, for instance, confront quite different markets from those in the west. In the external environment faced by enterprises in which both the so-called 'asymmetrical market' and central planning play important roles, the criteria used and factors considered in decision-making are unlikely to be the same as in a well-developed market economy. It might be argued that many approaches for decision-making analysis in western management accounting, especially those for which mature markets are essential, are unlikely to work well in present Chinese

environments. Simple examples are the determinations of cost of capital and of opportunity cost. In the former case, in China interest rates are often taken as the substitute for cost of capital regardless of the real sources of the capital concerned, owing to the absence of a capital market in any real sense. The consideration of opportunity cost in some cases involves a considerable amount of uncertainty under the present Chinese 'dual-pricing system'. Under this system, factors and products produced under State planning or contract quotas are distributed at State-fixed prices, while production over the plan can be traded by producers at market prices, which are normally much higher than the State-controlled prices. Here, the same product with the same cost and quality can yield different margins for different producers. Similarly, different purchasers may face different input costs for the same factors.

In the control area, cultural differences become more meaningful because culture affects people, their needs, wants, and aspirations – in a word, behavior, and therefore influences managerial philosophy and practice.[40] Differences in cultural factors between China and the west could reasonably be expected to cause management control systems, and therefore accounting control systems to differ to a greater or lesser extent. Other factors, such as the political system, the nature of business ownership, the level of sophistication of business management and of the financial community, the state of economic development, the status of professional education, have linkages with accounting,[41] including management accounting.

Fortunately, in China, unlike in the USSR (at least in the past), the concept of management accounting is not held to be 'permeated with untoward ideological connotations' just because it originated among the leading industrial corporations of the most advanced capitalist economies.[42] This does not mean, on the other hand, that Chinese management accounting will blindly follow the western system. Given the above analysis, it would seem reasonable to expect that the Chinese system of management accounting will be developed by assimilating both elements of western approaches and also of Chinese experiences in this field.[43]

Incorporating Various Ideas and Approaches

Many Chinese writers agree that in spite of a different socioeconomic system and cultural background, Chinese management accounting may still use the Anglo-American system as its main frame of reference, because although the subject originated in these countries, many of the concepts and techniques developed seem to represent a trend for future development in many other countries. However, in developing a Chinese management accounting system, many writers believe that special attention should be paid to two other systems which differ from the Anglo-American system to varying degrees – the Soviet system and the Japanese system. Although Chinese accounting and its Soviet prototype have gone different ways in the past 30 years, the Soviet influence in the 1950s was so deep-rooted that the two systems resemble each other in nature even after 30 years of separation. More significantly, the two countries share the same basic socioeconomic system. This implies that their accounting systems may have much in common and that they may encounter similar problems in reforming their accounting systems, even though China seems to have been more intrepid in accepting western management accounting.

Japan, among the developed industrial countries, is said to have a unique style of management, combining the western principles with the Japanese culture and ideology. Some Chinese accountants argue that Japanese management systems and their approaches to management accounting are more meaningful to and suitable for Chinese enterprises,[44] as China and Japan seem to share many of the same cultural patterns, which helps to explain common behavior in the two societies, such as obedience to authority, high rates of literacy, the desire to achieve, and the willingness to work hard.[45] The Japanese attempt to eliminate inventories in contradiction to the economic quantity model, and their success in creating systems for Total Quality control provide good examples for those who are seeking to learn from others.[46] As more attention has been paid to Japanese management systems in China in recent years, some techniques, such as management by objectives, value engineering, and total quality control, have been adopted and practiced in some Chinese enterprises. Consequently, relevant accounting techniques such as target costing, function-cost analysis and quality-cost analysis have also entered the sphere of Chinese management accounting.

Adopting a Critical Approach to Western Prototype

In seeking to learn and assimilate western management accounting, being critical seems essential, at least in China. After a 10-year period of learning and trial, more and more Chinese accountants have begun to realize that western management accounting itself is far from perfect and does not offer a panacea. This sentiment has been heightened when western criticisms of Anglo-American management accounting and of currently used research approaches, such as Kaplan (1982) and Scapens (1985),[47] became known in China. It was noted that to avoid similar detours in China, it is necessary to undertake further research on the western prototype and to gain a clearer idea of its problems and trends.[48] The existing problems in the western system, such as the divorce of academic research from practice, the lopsided development of 'sophisticated' quantitative techniques and models, and the lack of a sound theoretical basis,[49] may be seen as warning signs for the unshaped Chinese management accounting system.

Although it should be recognized that western accounting thought is far from settled, the Chinese do have an advantage as they can promulgate accounting principles from the center. In addition, the gap between China and the west does not render management accounting thought and techniques newly developed in the west meaningless for China. Agency theory, for instance, may be an especially enlightening model for Chinese managers and accountants. As managers and accountants are actually appointed by the State administrative authority, they are clearly agents.[50] The contract system applied to Chinese State enterprises in recent years is an interesting development from an agency perspective. The control mechanism based on the principal–agent relationship might provide an alternative for regulating the relationship between the state and enterprises. Agency developments in the west might therefore be expected to attract more attention from the Chinese accounting community in the future.

Conclusion and Prospect

Accounting is a pragmatic craft with numerous determinants, including those of a socioeconomic nature. In the Chinese case, as has been illustrated, accounting systems have rapidly responded to and have been facilitated by the changes in the socio-economic structure and in enterprise management, resulting in the explicit development of a management accounting and a series of changes in accounting thought and practice. From this point of view, it appears that early ready acceptance and speedy spread of western management accounting in China was a matter of inherent necessity rather than of fortuity.

Western management accounting has been used and studied in China for a decade, and can be said to have contributed greatly to Chinese accounting practice and thought. However, management accounting in China does have problems. Most of these problems result from the perceived unsuitability of the western techniques for the Chinese environment or the failure of the Chinese environment to meet the underlying assumptions necessary for these techniques to operate. To overcome these problems, it seems necessary for Chinese management researchers and accounting researchers to obtain a clearer understanding of present and possible future social and economic environments for enterprises and to develop techniques that can work properly in these environments.

As has been the case in the past, the future development of Chinese management accounting will largely depend upon the direction and pace of the economic reforms, and particularly upon the future changes in the pattern of enterprise operation and management.

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Book Reviews

International Group Accounting: International Harmonisation and the Seventh EEC Directive *by S.J. Gray and A.G. Coenenberg. Croom Helm, London, 1988.*

This book presents several perspectives on consolidation accounting within the European Economic Community (EEC). It reports the proceedings of a conference on the Seventh EEC Directive, which was chaired by Professor Adolf Coenenberg (University of Augsburg) and professor Sid Gray (University of Glasgow), held in June 1986. The Seventh Directive on consolidations and group accounts was approved in 1983 and is required for practice not later than 1990.

This collection of papers would be valuable to those who wish to understand the impact of EEC Directives on accounting in European countries and on companies with subsidiaries in Europe. Not only does it discuss what is required to meet EEC standards for reporting for business groups, in detail and from several perspectives, but it also gives many insights into accounting variations that exist among member countries of the EEC.

The purpose of the conference was to review the objectives and provisions of the Seventh Directive, especially the concept of a "true and fair view," and to comment on the probable impact on consolidation accounting in the EEC. Other major issues addressed are accounting for goodwill and merger accounting (Leslie G. Campbell), foreign currency translation (Walther Busse Von Colbe; Gerald N. Lawson), and segmental reporting (Clive B. Emmanuel, Neil W. Garrod and Ceri Frost). The report contains eight country studies that offer perspectives on the Seventh Directive from Belgium (Walther Aerts and Hilda Theunisse), France (Dang Pham), Germany (Klaus von Wysocki), Italy (Arnaldo Canziani), The Netherlands (Jan Klaassen), The United Kingdom (Christopher Nobes), Switzerland (André Zünd), and the United States (Konrad Kubin).

The keynote paper on the aims and the scope of the Seventh Directive is by Hermann Neissen, a lawyer representing the Commission of the European Communities. The Treaty of Rome gave the Commission the power to harmonize national company laws by way of directives. Directives are binding on the member states and are integrated into national law by implementing legislation within stipulated time limits.

The purpose of company law harmonization is to provide not identical but equivalent safeguards throughout the EEC. The Fourth Directive treated the accounts of individual companies, giving the standard layout for financial statements and providing minimum requirements on the contents of the notes and the annual report. The Eighth Directive concerns the qualifications of auditors. The Fourth and Seventh Directives have the common overriding principle that they present a true and fair view of the assets, liabilities, financial position and profit and loss of the company or group.

Neissen explains that Member States of the EEC must consolidate accounts whenever a parent company has the legal power of control over a subsidiary, either by having a majority of voting rights, or the right to appoint the majority of board members, or a contract giving control. But Member States may go beyond these mandatory provisions by providing for consolidation also when minority participating interests are used for an actual control either by exercise of a dominant influence or management on a unified basis. A similar option has been given for horizontal groups (without any parent-subsidiary relationship), for example by way of interlocking directors.

Consolidations prepared according to accounting standards of Third States (such as the United States) may also be accepted under the condition of equivalence with Seventh Directive accounts.

"A True and Fair View in Consolidated Accounts" is written by David Flint, University of Glasgow. Flint explains the overriding standard of the Seventh Directive is that consolidated accounts shall give a true and fair view of the assets, liabilities, financial position and profit and loss of the undertakings included therein taken as a whole. Where application of the specific provisions of the Directive would not be sufficient to give a true and fair view, additional information must be given, and in exceptional cases it may be necessary to depart from a provision in order to give a true and fair view. Any such departure must be disclosed in the notes on the accounts together with an explanation, of the reasons for it and a statement of its effect on the assets, liabilities, financial position and profit and loss. The Member States may define the exceptional cases in question and specify the relevant special rules.

The concept of a true and fair view had been in use in Ireland and the United Kingdom for some years, but the concept was new to many states with the enactment of the Fourth Directive in 1983. There is no formula and no single authoritative interpretation of the concept of a true and fair view. It is more than truth alone. It is an abstraction, but the law uses similar concepts, such as "reasonable care." It goes beyond standards as prescriptions because prescription can specify data, but it cannot deal exhaustively with a requirement for information which is both judgmental and situation-specific. Flint suggests that a true and fair view expresses the ethic of financial reporting.

The eight country studies discuss the relevance of the Seventh Directive for six countries within the EEC and for two outsiders: Switzerland and the United States. They provide detailed references to provisions of the Seventh Directive and to provisions of local accounting standards of each country. The country studies note many differences in local accounting standards due to differences in political, legal, and economic circumstances of the individual states. The country studies are interesting

as much for their descriptions of the local environments of accounting standards as they are for their reactions to provisions of the Seventh Directive. This evaluation includes the reactions of the two nonmember countries.

For example, André Zünd describes Switzerland as an underdeveloped country in terms of accounting and auditing. Although it is one of the most industrialized countries in the world, Zünd says, Switzerland has few rules on accounting practice, secret reserves are tolerated, auditing requirements are minimal, and the standard-setting process is at a rudimentary stage. Improvements have begun, however, since the creation of the Swiss Foundation for Accounting and Reporting Recommendations in 1984. The foundation appointed Zünd as chair of a board that prepares recommendations for disclosure and reporting of Swiss companies, a board that he says was greatly inspired by the Financial Accounting Standards Board of the United States.

Konrad W. Kubin's paper includes a detailed comparison of the provisions of the Seventh Directive with US accounting standards. Most differences result from the fact that the Directive provides options, whereas US standards recognize only one of the alternatives as acceptable. Kubin believes the overall impact of the Seventh Directive on the accounting practices of publicly held US corporations will only be slight, if the member states implement all available options into their national laws. However, the Directive's impact on privately owned US companies, which have not previously published audited financial statements, is likely to be substantial.

As outlined above, the book also includes papers that focus on foreign currency translation, acquisition and merger accounting, goodwill, and segmental reporting. These papers and many of the country studies cover standards for both measurement and disclosure, provisions that are required and optional provisions that are allowed to member states.

The book is of value to those who have an interest in accounting for companies or subsidiaries located in Europe. It can serve as a convenient reference and as a guide to further reading on specific topics covered in the report.

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C. A. Bana e Costa, Technical University of Lisbon (Ed.)

Readings in Multiple Criteria Decision Aid

1990. XII, 660 pp. 124 figs. 40 tabs.
Hardcover DM 178,– ISBN 3-540-52950-0

This book covers the different trends in MCDA Research, not only in terms of "methods" but also in discussion of fundamental methodological aspects, basic theoretical concepts and conditions and problems embodying a robust real-world decision aid practice. Emphasis is also given on MCDA software descriptions, which are significant tools for aiding "analysts" in aiding "decision-makers".

L. F. Pau, Technical University of Denmark, Lyngby;
C. Gianotti, Milano

Economic and Financial Knowledge-Based Processing

1990. XV, 364 pp. 67 figs. 12 tabs.
Hardcover DM 128,– ISBN 3-540-53043-6

As banks, financial services, insurances, and economic research units worldwide strive to add knowledge based capabilities to their analyses and services, or to create new ones, this volume aims to provide them with concrete tools, methods and application possibilities. The tutorial component of the book relies on case study illustrations, and on source code in some of the major artificial intelligence languages.

M. J. Liberatore, Villanova University, Villanova, PA (Ed.)

Selection and Evaluation of Advanced Manufacturing Technologies

With contributions by numerous experts

1990. VI, 324 pp. 23 figs. 52 tabs. Hardcover DM 120,– ISBN 3-540-52656-0

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FAS-52, Functional Currency, and the Non-Comparability of Financial Reports

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Key words: FAS-52; Functional currency; Foreign currency translation

Abstract: *Revised regulations contained in FAS-52 for reporting U.S. based multinational corporations' (MNCs) operations abroad pivot on the concept of the "functional currency". Under FAS-52 the choice of the functional currency determines the recognition of foreign currency translation gains, losses, and adjustments. Although this has mollified some critics of FAS-8, the specter of the potential non-comparability of reported financial data across firms due to the functional currency concept has not received proper attention. This study highlights this potential and contends that it will not be confined to isolated instances. Further, this study presents empirical evidence of some MNCs "switching" functional currencies without any major change in the underlying economics (of the firm) and examines the detrimental effect of such practices on the comparability of the reported results.*

Introduction

The international operations of U.S. multinational corporations (MNCs) have grown significantly during the last three decades. Given their sizable investment abroad, a challenging task for the U.S. accounting profession has been the development of an appropriate set of rules for measuring the results of foreign operations in terms of the U.S. dollar.

Prior to 1976, several translation methods were used by U.S. MNCs. Because these methods were not always mutually consistent, a wide variation in reported results would follow a given movement in the exchange rates for two otherwise identical firms. The resultant disparity in the financial reporting of MNCs reduced the comparability of financial statements to outsiders. This situation was exacerbated following the end of the Bretton Woods (fixed exchange rate) system in 1973, when

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exchange rate volatility increased. The Financial Accounting Standards Board (FASB), in an attempt to standardize such reporting, issued Statement No. 8 (FAS-8) in October 1975. From its inception, however, FAS-8 received a barrage of criticism. Translation practice under its requirements often produced accounting gains (losses) which were at variance with the economic reality. Further, the inclusion of translation gains (losses) in the income statement increased the volatility of the parent's reported earnings. Sustained widespread corporate dissatisfaction with FAS-8 led the FASB to revise the accounting rules in 1981 by issuing Statement No. 52 (FAS-52).

The unique feature of FAS-52 is the introduction of the functional currency concept. Under FAS-52, the choice of the functional currency (FC), determines the recognition of foreign currency translation gains, losses and adjustments. Although FAS-52 has not incurred the major criticisms levelled at FAS-8, the statement has created some problems. Critics claim that it violates the principle of "clean surplus" by accumulating translation adjustments in the stockholder's equity; further, it introduces multiple units of measures and departs from the conventional accounting principle of temporal reporting and renders some translated amounts uninterpretable (e.g., fixed assets) thereby making across-the-board comparison meaningless.[1] Criticisms to date have not, however, focused on the concept of FC and its potential for raising the specter of non-comparability of the reported financial data across firms. This paper examines the notion of FC and describes how the potential for distortions arises. Further, this study also presents empirical evidence of "switching" of functional currencies by some MNCs without any major change in the underlying economics (of the firm) and examines the detrimental effect of such practices on the comparability of reported results. Indeed, in light of some economic realities, the potential for bias is much greater than generally realized.

Section I presents a brief review of FAS-8. Section II examines the functional currency concept in detail and discusses its potential to create distortions in financial reports. Empirical evidence with respect to firms switching functional currencies is also presented. In Section III, alternative situations where distortions in financial reporting may occur are described. Section IV presents some recommendations to reduce such distortions. Section V presents concluding remarks.

I. FAS-8 and Corporate Reaction

The process of translating foreign-currency-denominated financial statements into U.S. dollar amounts requires the consideration of two major elements: (i) the criteria for choice of appropriate exchange rate (e.g., current or historical) for translating assets, liabilities, revenues and costs and (ii) the reporting of the resultant translation gains (losses). FAS-8 addressed these issues by adopting the temporal method of translation which is essentially the monetary/non-monetary method with minor variations. Under this method, all the monetary assets and liabilities are translated at the current exchange rate and all the non-monetary items (with the possible exception of inventories) are translated at the historical exchange rate. Since only the items translated at current rates are exposed to gains or losses from currency fluctuations,

the net monetary asset (liability) position of the entity determines its translation exposure.

The temporal concept was not too appealing to an MNC which would invest in plant and equipment abroad and finance them locally so that a natural hedge was created (alternatively, the depreciation amount, albeit noncash in nature, would be adequate to cover the debt service). Because long-term debt is translated at a current rate under FAS-8 and fixed assets are translated at the historical rate, any increase in the value of the local currency in terms of the U.S. dollar would increase the liability without any commensurate increase in assets thus creating a translation loss. The economic reality may, however, indicate the absence of an effect on the value of the foreign subsidiary.

Further, FAS-8 required the immediate recognition of translation gains (losses) in the income statement. This, in turn, exaggerated the volatility of the reported earnings of the consolidated entity. MNCs responded to this situation in different ways. At the one extreme, some companies, such as Clark Equipment Company, did nothing in the belief that the market has the ability to interpret the reported numbers.[2] At the other extreme, Rouse Company reportedly liquidated its Canadian subsidiary strictly to avoid earnings fluctuations caused by FAS-8.[3] But most companies tended to engage in extensive hedging activities in an attempt to smooth the spurious earnings fluctuations.[4] The corporate disenchantment with FAS-8 grew as financial officers of MNCs found themselves devoting substantial amounts of time and corporate resources in dealing with the often spurious earnings fluctuations. As a result, FAS-8 was replaced by FAS-52.

II. FAS-52 and Functional Currency

As mentioned earlier, the main conceptual departure of FAS-52 from FAS-8 is the introduction of the FC in the translation process. For a subsidiary whose FC is the local currency (LC) all balance sheet items (except equity) are translated at the current rate, equity items at historical rate, and income statement items at average rate; the translation gains or losses are included in owners' equity as translation adjustments.[5] On the other hand, when a subsidiary's FC is the U.S. dollar, the FAS-8 regulation remains in effect for all intents and purposes.

Broadly stated, the FC of an entity is the currency of the primary economic environment in which it operates. The critical task for management of MNCs in dealing with the translation problem is to determine the FC for all subsidiaries. FAS-52 has provided a set of guidelines as an aid to managers in the proper choice of the FC. The guideline recommends that important aspects of subsidiaries' operation, such as cash flow currency, location of main sales market, volume of intra-company transactions, sources of factor inputs, and financing, must be carefully considered before the final choice of the FC is made. However, this does not necessarily mean that a choice of a currency as the FC is based on a mere arithmetic count of the indicators favoring that currency.[6] An individual entity's economic relation with the parent should dictate the accounting mechanism for translation in order to ensure

Table 1. Some U.S. MNCs and Functional Currency for their Subsidiaries

Company	Functional currency	Explanatory comments
Caterpillar Tractor	$	Exception for affiliates Japan and India where the LC is the FC
Dow Chemical	$	Exception for Germany and Japan where the LC is the FC
DuPont (EI)	$	
Exxon	LC	Exception for highly inflationary economies and operations in Norway, Malaysia, and the Mideast where $ is the FC
General Electric	$	For a few affiliates, the LC is the FC
General Motors	LC	Exception for highly inflationary economies and operations in Canada where $ is the FC
Gillette Company	LC	Exception for highly inflationary economies
Gulf Oil	$	Exception for Gulf Canada where Canadian $ is the FC
Hercules	LC	Exception for highly inflationary economies
IBM	LC	For a few affiliates the $ is the FC
ITT	LC	Exception for highly inflationary economies
3M Company	LC	Exception for highly inflationary economies
Standard Oil of California	$	For a few affiliates LC is the FC
Texaco	$	

Source: annual reports of individual firms for 1982 and 1983.

consistency of translation results with the underlying economics.[7] Further, in instances where an evaluation of the factors produces a mixed indication of the FC, management is given discretion in the choice of the FC. The only exception to this discretion is when an economy in which a subsidiary is operating experiences hyperinflation, i.e., more than 100% inflation over a three-year period; in that case, the U.S. dollar is the FC for the subsidiary in question.

The discretion granted to management raises the likelihood of differing accounting responses for similar situations. For example, two companies may be operating in similar economic environments, yet they may assess the situation differently and choose different FCs. Table 1 shows that Texaco has chosen the U.S. dollar as the FC for its subsidiaries, while Exxon has chosen the local currencies as the FCs for the most of the subsidiaries. Because both of these MNCs are in the same line of business and compete more or less in the same markets, one can expect the relationship between one parent and its subsidiaries to be roughly similar to that between the other and its subsidiaries. Their choices of different FCs, however, make any comparison of their reported results difficult and of doubtful value.

Table 2. Alternative Reporting of Translation Related Gains (Losses) under FAS-52

	Exxon	Texaco
	Translation adjustments posted in the Balance Sheet	Translation gains (losses) posted in the Income Statement
1981	($1,247.52) millions	$57 millions
1982	(818.682)	62
1983	(538.77)	99
1984	(748)	55
1985	669	40
1986	953	137

Source: annual statements of individual firms.

FAS-52 clearly states that its main objective is to provide information that is generally compatible with the expected economic effects of a rate change on an enterprise's cash flows and equity. But Table 2 reveals that the impact of exchange rate changes on the reported income and equity of Texaco was positive whereas it was negative for Exxon except for 1985 and 1986. Thus, in many instances, the translation objectives set by FAS-52 may not have been achieved and reporting may be distorted because MNCs may unwittingly choose the wrong FCs for their subsidiaries.

Further, once a firm decides on a FC, it must be consistently used. A switch in the FC is permitted only when there is a substantial change in the underlying economic situation. Given this flexibility, some firms may be tempted to change the FC (without any major change in the underlying economic situation) to enhance the financial statements. Table 3 reveals that some companies have changed their FCs. Although the rationale for the change is not provided in the financial statements or related notes, the change from the U.S. dollar to the local currency during 1985-86 (when

Table 3. Change in the Functional Currencies by some MNCs

Data General	Changed functional currencies of its operations in Australia, Canada, Europe, New Zealand and Singapore from the U.S. dollar to the local currencies.	March 30, 1986. For Singapore June 29, 1986.
Exxon	Changed the functional currency of its Norway operation from U.S. dollar to the local currency.	January 1, 1985.
General Electric	Changed functional currency of its Netherlands affiliate from the U.S. dollar to the local currency.	January 1, 1985.
Caterpillar Tractor	Initially, the U.S. dollar was the functional currency for its consolidated and equity basis companies; in 1986, the functional currency for most of its equity basis companies was the local currency.	January 1, 1986.

Source: annual reports of individual firms for 1985, 1986, and 1987.

Table 4. XYZ Co..Balance Sheet (12/31/xx)

		Functional Currency U.S. Dollar ($)		Functional Currency Deutsche Mark (DM)	
	Local Currency DM	Exchange Rate	U.S.$	Exchange Rate	U.S.$
Cash	200	0.50	100	0.50	100
Receivables	300	0.50	150	0.50	150
Inventory	400	0.45	180	0.50	200
Net fixed assets	1500	0.40	600	0.50	750
	2400		1030		1200
Current liabilities	400	0.50	200	0.50	200
Long term debt	800	0.50	400	0.50	400
Common stock	900	0.40	360	0.40	360
Retained earnings	300		70		135
Cumulative translation adjustments			–		105
	2400		1030		1200
Income Statement for the year XX					
Sales	2000	0.45	900	0.45	900
Cost of sales	(1000)	0.45	(450)	0.45	(450)
Depreciation	(100)	0.40	(40)	0.45	(45)
Other expenses	(400)	0.45	(180)	0.45	(180)
Taxes (40%)	(200)	0.45	(90)	0.45	(90)
Income before Tr. gain (loss)	300		140		135
Tr. gain (loss)			(70)		–
Net income			70		135

the value of dollar was generally declining), which tends to enhance the financial statements, raises questions regarding the underlying motivation for the change, especially when the change is not industry-wide.

To illustrate this point, a hypothetical example is presented in Table 4. A year ago, XYZ Co., a German subsidiary of a U.S. based MNC, was organized with DM200 in cash and fixed assets worth DM1600 that were financed by equal amounts of equity and DM-denominated long-term debt. Assume that the value of the dollar has been declining during the year. Let the initial exchange rate be $0.4 = DM1, and the ending rate $0.5 = DM1; then the average rate during the year will be $0.45 = DM1. Table 4 reveals the impact of the switch of the FC currency from $s to DMs on the financial reports. The translation loss of $70 is transformed into a translation gain of $105 (which is included in the Balance Sheet) when the FC is switched from $s to DMs. The switch systematically affects several accounts, that is, the reported income, fixed assets, owners' equity, and the financial ratios based on these accounts.

The translation gain or loss due to exposure in a given period may be expressed as:

Translation gain (loss) = Beginning-of-the-period net exposure in LC x (Ending $/LC – Beginning $/LC) + Change in net exposure during the year x (Ending $/LC – Average $/LC).[8]

Table 5. Selected currency values (currency units per U.S. dollar)

	Austrl. dollar[a]	French franc	German DM	Netherlands guilder	New Zealand dollar	Norwegian krone	Singapore dollar	Swiss francs
1982	101.65	6.5793	2.428	2.6719	75.101	6.4567	2.1406	2.0327
1983	90.14	7.6203	2.5539	2.8543	66.79	7.3012	2.1136	2.1006
1984	87.937	8.7355	2.8454	3.2083	57.837	8.1596	2.1325	2.35
1985								
Jan	81.51	9.7036	3.1706	3.5819	47.04	9.1765	2.2011	2.6590
Mar	69.70	10.078	3.2982	3.7290	45.276	9.4608	2.2582	2.8033
Jun	66.51	9.3414	3.636	3.4535	45.949	8.8255	2.2291	2.5721
Sep	68.95	8.6599	2.8381	3.1921	53.285	8.3337	2.2268	2.3749
Dec	69.11	7.6849	2.5122	2.8293	52.633	7.6524	2.1213	2.1042
1986								
Jan	70.00	7.4821	2.4384	2.7489	51.857	7.5541	2.1284	2.066
Mar	70.79	6.9964	2.2752	2.5678	52.820	7.1711	2.1600	1.915
Jun	68.89	7.1208	2.2337	2.5154	54.585	7.6117	2.2232	1.8406
Sep	62.21	6.6835	2.0415	2.3050	47.950	7.3429	2.1680	1.6537
Dec	65.95	6.5296	1.988	2.2470	51.339	7.5294	2.190	1.6647
1987								
Jan	66.09	6.2007	1.8596	2.0978	53.605	7.1731	2.151	1.5616
Mar	68.17	6.1091	1.8355	2.0731	56.333	6.9335	2.1418	1.5391
Jun	71.79	6.0739	1.8189	2.049	58.656	6.7147	2.1176	1.5085
Sep	72.68	6.0555	1.8134	2.0413	63.353	6.6505	2.0924	1.5029
Dec	71.06	5.5375	1.6335	1.8382	64.664	6.382	2.0127	1.3304
1988								
Jan	71.11	5.5808	1.6537	1.8584	65.818	6.3538	2.0261	1.3466
Mar	73.29	5.6893	1.6770	1.8837	66.239	6.3337	2.0133	1.3863
Jun	80.76	5.931	1.7579	1.9767	69.996	6.3951	2.0285	1.4629
Sep	79.15	6.3515	1.8668	2.1063	61.48	6.9150	2.0409	1.5763
Dec	85.73	5.994	1.7563	1.9824	63.621	6.5234	1.9442	1.4799

[a] Value in U.S. cents
Source: various issues of Federal Reserve Bulletin.

When the local currency is the functional currency, i.e., under the current rate approach, all assets are exposed, whereas under the dollar-as-the-functional currency (the temporal approach) at least the fixed assets will not be exposed. All liabilities are exposed under both the approaches. Thus, as far as the reported data are concerned, the use of the current rate approach results in a larger gain when the local currency appreciates. When the local currency depreciates, the use of the temporal approach enhances the financial reports.

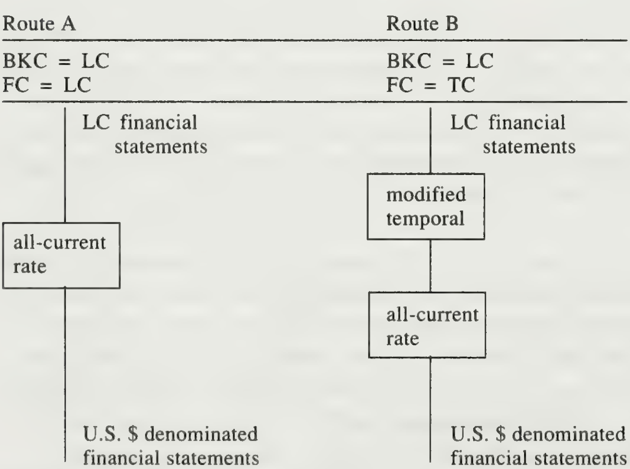
From late 1979 to late 1984, the value of the dollar generally increased against other major currencies but then started to decline during the second half of 1985 (see Table 5 for selected currency values). Through the Plaza Agreement of September 1985, the Group of Five Nations (USA, UK, France, West Germany and Japan) openly committed themselves to launch a concerted effort to bring the value of dollar down against their currencies.[9] Companies which initially designated the $ as the FC have benefitted from the strengthening of the U.S. dollar until 1984 (as far as reported financial numbers are concerned) and of these, those which changed the FC from the $ to LC on or after 1985 have benefitted from the weakening dollar as well. Naturally, such practices adversely affect the historical comparability of the financial statements and also, to the extent that industry practices are not uniform, the across-the-board comparisons of firms in the same industry.

Under the provisions of FAS-52, the FC for a foreign entity can be the U.S. dollar, local currency, LC, or even a third currency (hereafter, TC).[10] When a subsidiary's FC is a TC, the financial statements of the subsidiary are first remeasured from the LC into the TC following the (slightly modified) FAS-8 regulations. Thereafter, the TC-denominated financial statements are translated into the U.S. dollar following the current-rate approach. This provision again gives rise to a potential for distortions of the financial reports which are explored in the next section.

III. Third Currency (TC) as a Functional Currency

Consider first the case of a subsidiary located in a country X whose currency is pegged to the U.S. dollar. Suppose it caters mainly to the needs of another subsidiary located in country Y. Further assume that the FC for subsidiary X is not unambiguous and the evaluation of economic factors regarding its operation indicates two equally likely candidates for the FC: LC, the currency of country X, and TC, the currency of country Y. The alternative translation processes are dictated by the choice of the functional currency, and may be either a one-step process (all-current rate) or a two-step process involving both modified temporal and all-current rate methods depicted in Figure 1. If the LC is chosen as a FC, the translation process takes Route A and all-current rate method is used for translation. If a TC is selected as the FC, then translation process takes Route B.

Variation in the final translated amounts for the same subsidiary under the alternative routes can be demonstrated by considering some financial statement items provided in Table 6a. Let the exchange rate between LC and the U.S. dollar be fixed



BKC = Book-keepeing currency
FC = Functional currency
LC = Local currency
TC = Third currency (other than LC or U.S. $) as FC

Figure 1. Alternative translation routes under FAS–52.

at LC 1 = $1 and that between the TC and U.S. dollar (and thus between the LC and the TC) be floating. As shown in Table 6b, the translated financial numbers via Route A in the U.S. dollar are the same as those in the LC and there will be no translation adjustments in the statements because the exchange rate is fixed at LC 1 = $1.

In Table 6c, three different currencies are involved in the translation process through Route B. Since the TC is the FC, the first step in the translation process is to remeasure financial statements from the LC into the TC using the modified temporal

Table 6a. Subsidiary X Balance Sheet

	1/1/XX	12/31/XX
Cash	LC 400	LC 400
Inventories (FIFO)	300	470
Net fixed assets	350	300
Total assets	1050	1170
Liabilities	300	300
Equity	750	870
Total lianbilities and equity	1050	1170

Income Statement for the year XX

Net sales	LC 500
Cost of sales	(300)
Depreciation	(50)
Taxes	(30)
Net Income	120

Exchange rates

Rate on 1/1/XX or Historical rate (HR)	Rate on 12/31/XX or Current rate (CR)	Average rate (AR)
LC1 = $1	LC1 = $1 (fixed)	LC1 = $1
LC1 = TC1.75	LC1 = TC2	LC1 = TC1.86
TC1 = $1/1.75	TC1 = $1/2	TC1 = $1/1.86

Table 6b. Translation using all-current rate approach (some selected end-of-period Balance Sheet and Income Statement accounts)

	(Route A) (LC ⟶ $)		
	LC	ER	($)RC
Inventories	470	1:1 (CR)	470
Net fixed assets	300	1:1	300
Translation adjustments	–		–
Net sales	500	1:1 (AR)	500
Cost of sales	(300)	1:1	(300)
Depreciation	(50)	1:1	(50)
Taxes	(30)	1:1	(30)
Translations gains (losses)	–		–
Net income	120		120

Table 6c. Two-step translation process using both the modified temporal and the all-current rate methods

(Route B) modified temporal (LC ⟶ TC) all-current (TC ⟶ $)

	Modified temporal LC	ER	TC	All-current rate ER	($) RC
Cash	400	2 (CR)	800	1/2 (CR)	400
Inventories	470	1.86 (AR)[a]	874*	1/2 (CR)	437
Net fixed assets	300	1.525[b]	458	1/2 (CR)	229
	1170		2132		1066
Liabilities	300	2 (CR)	600	1/2 (CR)	300
Equity	870		1532[c]		958[f]
Translation adjustments	–		–		(192)[g]
	1170		2132		1066
Net sales	500	1.86 (AR)	930	1/1.86 (AR)	500
Cost of sales	(300)	1.45[d]	(435)	1/1.86 (AR)	234
Depreciation	(50)	1.525	(76)	1/1.86 (AR)	(41)
Taxes	(30)	1.86 (AR)	(56)	1/1.86 (AR)	(30)
Translation gains (losses)			25[e]	1/1.86	13
Net income	120		388		208

* Figures are rounded.

[a] Acquired in equal amounts during the period

[b] Acquired when exchange rate was LC1 = TC1.525

[c] Common stocks issued when LC1 = TC1.525, TC1 = $1/1.525
Equity = LC750 x 1.525 + 388 I TC1144 + TC 388 = TC 1532

[d] Represents inventories purchased the previous period when LC1 = TC1.45

[e] Translation gain (loss) = LC 100(2–1.75) = TC25

[f] Equity = TC 1144 x 1/1.25 + $208 = $958

[g] Translation adjustments:
Beginning net assets in TC = TC 1144 (1/1/XX)
Beginning translation adjustment balance:
$= TC\ 1144 \times \frac{\$1}{1.75}$ (Exchange rate 1/1/XX)
– $750 (Equity reported 1/1/XX)
= $654 – 750 = (96)
Accumulated translation adjustments
= TC 1144 (1/2 – 1/1.75) + 388(1/2 – 1/1.86) + (96)
= (81.7) + (14.6) + (96)
= (192)

or

Net assets in TC (12/31/XX) = TC 1532		
x $1/2 (Exchange rate 12/31/XX)		$766
Less		
Capital stock in $ (12/31/XX) $750	}Equity	
Retained earnings (12/31/XX) $208		($958)
Translation adjustments		(192)

method. Given the floating exchange rate between the LC and the TC, translation gains (losses) would be likely to materialize and they would be reported in the income statement. The second step will involve the translation of the TC-denominated financial statements in the U.S. dollar using the all-current rate method. Again, since the exchange rate between TC and the U.S. dollar is floating, translation gains (losses) would result which will now be reported in the U.S. dollar-based balance

Table 7. Percentage change in the U.S. dollar amounts via alternative reporting routes

	Route A	Route B	Percentage change
Inventories	$470	$437	–7%
Net fixed assets	300	229	–23.66%
Cost of sales	(300)	(234)	–22%
Depreciation	(50)	(41)	–18%
Translation gains (losses)	0	13	
Translation adjustments	0	(192)	
Net income	120	208	+73.33%

sheet. Further, since the exchange rate between the LC and the TC is flexible, the reported income in the consolidated statement will be subject to increased volatility. Along Route B (instead of Route A), the reported net income increases by 73.33% and assets decrease by as much as 23.66% (see Table 7). Finally, the reported income (as well as the net worth) of the consolidated entity will experience increased volatility under Route B. The magnitude of this volatility will depend on the movement of exchange rate between the LC and the TC or between the TC and the U.S. $. It should be noted that, under Route B, specific accounts such as fixed assets are first translated at the historic exchange rate thus preserving the historic-cost accounting principle; but the second step requires translation of the same accounts at the current exchange rate. The resultant numbers are difficult to interpret.

FAS-52, in an attempt to bring compatibility between the reported numbers and economic reality, has provided management flexibility to choose the FC. Unless a correct choice of the FC is made, the very flexibility may induce distortions in financial reporting. Thus, even when the underlying economic logic demands translation along Route B, i.e., the FC is the TC, the MNC may opt for Route A by choosing the LC as the FC in order to avoid the increased volatility of reported earnings and net worth as well as the additional complexity introduced by the two-step translation process under Route B. On the other hand, when the correct FC is the LC, the MNC may be tempted to enhance the financial reporting results (at least in the short run) by choosing Route B, especially when reported earnings may be cast in a favorable light and the MNC perceives the market to attach importance to the reported earnings.

Consider now the extreme case when a subsidiary's book-keeping currency is the U.S. dollar; however, its FC is the TC. A concrete example is when a subsidiary is located in Panama and its sole function is distribution. For tax and tariff purposes, it imports goods from the U.S. for an ultimate destination in country Y. Because a Balboa (Panamanian currency) by law is equal to a U.S. dollar (Panama does not issue its own paper currency), the local books are typically kept in the U.S. dollar. If, in accordance with the FAS-52 guidelines, the proper FC for the Panamanian subsidiary is the TC, then the translation process will take Route B, although the "local" currency is the U.S. dollar. Thus, the local statements will be first remeasured into the TC using the modified temporal method and the TC statements will then be translated back in the U.S. dollar using the all-current rate. Notice that the conversion here is effectively from the U.S. dollar ⟶ TC ⟶ U.S. dollar.

If the true spirit of FAS-52 were to be observed, situations which may require the TC as a FC may not be isolated cases. Indeed, in many instances MNCs establish subsidiaries simply as a sourcing unit for other subsidiaries located in other countries. In electronic, textile, and appliances industries, the use of Asian or Mexican sources of supply is extensive; for instance, MNCs such as GM, GTE, and GE, have established affiliates in the Far East to manufacture products to be sold in the USA and other countries. Similarly, in European countries, an integrated manufacturing network is often used. In such a system, each entity in a given country specializes in a single component or product and meets the need of subsidiaries in other countries; for example, IBM's principal affiliates in Europe have substantial inter-affiliate sales of components or products. The phase of the life cycle of a product may necessitate locational shifts in production, creating in their wake complex economic relationships among subsidiaries as well as between subsidiaries and the parent. In such an environment, one can expect many instances where, in the true spirit of FAS-52, the TC will be the FC for the subsidiaries, although firms' practices may vary.

IV. Recommendations

The above discussion suggests that the vague guidelines provided by FAS-52 in the choice of the FC and the consequent latitude permitted to the firm's management have a real potential to reduce the comparability of the firm's financial statements not only over time but also with those of similar firms for a given period. The problem lies in the impact of a FC choice on (a) the magnitude of translation gains or losses, and (b) how these gains or losses are reported.

Comparability of consolidated financial statements can be enhanced by any combination of the following alternatives:

(1) *Reduce the vagueness in the guidelines for the FC choice.* FAS-52 relies on the criterion of a subsidiary being self-contained (or being an integral part of the parent) to determine whether the local currency (or the $) should be the FC. The determination of whether a subsidiary is self-contained (or an integral part of the parent) in turn, requires consideration of several factors such as: cash flows currency, sales markets, sales price, expenses, financing, and intracompany transactions. Neither relative importance nor the absolute magnitude of these factors is currently discussed in detail in FAS-52. Naturally, trade-offs among various factors and their relative significance are a matter of a well-conceived statistical study. In the interim, just as the FAS-52 position on hyperinflation (inflation in excess of 100% over a three-year period), it is possible to devise arbitrary but objective trade-off measures to determine whether a subsidiary is self-contained (or an integral part of the parent).

(2) *Hold management accountable for any material switches in the FCs.* Our investigation of financial statements of several MNCs failed to reveal statements of rationale for the switch of the FC. It is reasonable and desirable to require the disclosure of not just a switch but also the underlying rationale for the switch. And, just as in the case of a stock split, a firm is required to restate past

earnings, it is conceivable to require that management restate past earnings (in the income statement) and past reserves for translation gains or losses (in the balance sheet) upon material switches on the FCs.

(3) *Educate interested parties.* As Revsine (1984) has suggested, the education of accountants, auditors, managers, and security analysts with respect to the underlying rationale for the FC choice would reduce not only the temptation for but also the chances of making mistakes in such a choice. The above recommendations by their very nature are tentative, but exploration of their implications should be a fruitful exercise for future research efforts.

V. Conclusion

In its latest attempt to regulate the financial reporting of the U.S. MNCs' operations abroad, the FASB issued Statement No. 52 which supersedes all preceding statements. Although criticism with respect to FAS-52 has been voiced, the frustration on the part of the MNCs is not so evident as was the case with the FAS-8, very likely because FAS-52 introduced the concept of the FC whereby MNCs can bypass the income statement and post translation gains or losses directly in the balance sheet (when the functional currency is the local currency). But, however appealing the concept of the FC may be, this raises some uncomfortable problems. The choice of a FC, initially, depends on a MNC's own assessment of the situation. Given the wide latitude of choice by FAS-52, it may lead to a choice of different FCs for two similar firms operating under similar economic environments. The translated financial statements will substantially differ from each other, thereby reducing the comparability of the reported data. The situation is further exacerbated due to switching of the FC from $ to LC and vice versa by some MNCs. The potential for distorting financial results is further enhanced by the provision that the FC can be a third currency (TC), other than the LC or the U.S. dollar. In this case, translation involves a two-step process. Distortions may arise because MNCs may (or may not) designate a TC as functional currency even when the situation requires otherwise. Thus, under FAS-52, there is ample room for distorted reporting. In fact, in a survey of corporate executives by *Business International Corporation*, executives expressed the fear that some firms may be tempted to choose the FC for "income-embellishing" motives rather for sound economic reasonings. A further clarification of the present guidelines, along the lines suggested in Section IV, would enhance the effectiveness of FAS-52, particularly for the historical and cross-sectional comparability of financial statements.

Footnotes

1. See Largay III (1983) for these criticisms.
2. In fact, the vice-president and controller of Clark Equipment Co. stated: "Clark has the policy of not doing any foreign currency management. We let it fall and report it that way." *Business Week*, February 14, 1977, p112.
3. Rouse Co., a developer of major shopping centers, sold two shopping centers in Canada in 1979.

4. See Evans *et al.* (1978) and Cooper *et al.* (1978).
5. As per FAS-52 all revenues and expenses are translated at the exchange rate prevailing at the time they are recognized. (In practice, average exchange rate prevailing during that period is used.) This applies to accounting allocations too (e.g., depreciation). Depreciation expense is translated at the average exchange rate in the period in which this allocation is included in expenses (e.g., not the rates during the period of asset origination).
6. See Evans *et al.* (1986) and Revsine (1984) for an excellent discussion and illustration of the underlying theory of functional currency choice.
7. Suppose the subsidiary is just an extension of the parent; then the aim of the financial reporting as per FAS-52 should be to produce translated amounts which are equivalent to those that would have been produced had the parent undertaken the foreign business transactions itself instead of routing them through the subsidiary. It can be easily shown that this will indeed be the case if modified temporal method is used and translation gains (losses) are taken to the income. The choice of FC, in this case the $, is supposed to set this whole procedure in motion. See Revsine (1984).
8. Under this formulation the translation loss of ($70) and translation adjustment figure of $105 can be computed as follows:

	FC = $	FC = DM
Beginning net exposure	–DM700*	DM900
Ending net exposure (12/31/XX)	–DM700	DM1200

Translation gain (loss) = –700 (.5–.4) + (–700-(–700))(.5–.45) = ($70)
Translation Adjustments = 900(.5–.4) + (1200–900)(.5–.45) = $105

* Note: XYZ Co. was organized with DM200 in cash and fixed assets worth DM1600. Fixed assets were financed with equal amounts of long term debt and equity (i.e., DM900 each).

9. See Shapiro (1989, p. 79).
10. For example, a British subsidiary of a U.S. MNC may designate the French franc as its FC.

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Recent Accounting Developments in China: An Increasing Internationalization

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Key words: Chinese accounting practice; Chinese accounting research; Economic development; Economic structural reform; Internationalization

Abstract: *Since 1979 the reform of the economic structure in China, both depth and scope, has been penetrating every aspect of the entire society. As a result of the reform, many of the new economic relationships and transactions which are used in the international business community are now appearing in China. In such a new environment, Chinese accounting practice and theory have undergone a significant evolution to accommodate these rapid changes. The authors discuss the new frontiers of accounting development in China and identify the necessary interactions of the socio-economic environment and the development of accounting, and note that Chinese accounting development will move towards internationalization as long as China continues its current policies.*

Reform of the national economic structure is spreading throughout China and has been penetrating every aspect of the entire society. The impact of this reform is remarkably obvious and far-reaching. New business transactions and economic relations are emerging in a growing stream. These new transactions and relations have become the new frontiers of accounting developments in China. The Chinese accounting profession is now confronting the challenge to re-examine its current accounting practice and theory and to adapt itself to rapid changes in the national socio-economic environment. This article endeavors to summarize what happened in China in the period between the early part of 1987 and the early part of 1989 and to examine the related environmental events, to identify the ties between the socio-economic environment and the development of accounting, and to reach a tentative conclusion.

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Major Developments

In the process of Chinese economic structural reform, many measures, including great attention to market forces, have been used to improve the economic effectiveness of state-owned enterprises and to stimulate the development of the national economy. These measures have generated many new kinds of business transactions. Facing such a situation, Chinese accountants must consider how to account for transactions, such as securities, leasing, business combinations, business liquidations, use of land for remunerations, and intangible assets, with which accountants in Western countries are familiar. Changes in Chinese accounting practice are discussed below.

Changes in Accounting Practice

Accounting for Leases

Since 1980, considerable progress has been made in equipment leasing. It is currently an important channel through which Chinese enterprises can acquire complex fixed assets when needed, and it is an important instrument of financing. More than 30 leasing firms now exist in China. In 1986, the volume of lease transactions totalled more than $800 million. Current lease transactions in China, similar to those in Western countries, can be separated into two categories: an operating lease, and a financing lease.

Two accounting issues have arisen from lease transactions: one is whether all lease transactions should be reported on a capitalized basis; the other is what criteria should be used to distinguish capitalization from non-capitalization situations. Studies on accounting for leases have urged Chinese accountants to focus on the definition of assets (the equivalent of fund applications) and liabilities (a part of fund sources). Generally speaking, Chinese financial regulations and accounting procedures concerned with lease transactions are quite close to those stipulated in International Accounting Standard (IAS) No. 17, and those applied in American accounting practice (Accounting for Leases, FASB Statement No. 13). The latest accounting regulation, issued by the Ministry of Finance in April 1989, states that claims of the lessee in the fixed asset leased may not constitute assets of the lessee in the case of operating leases and the rents incurred should be treated as an item of expense during the term of leasing.

The accounting regulation for financing leases, which is well developed in China, states that both assets and liabilities are to be recognized by the lessee when a contract of a financing lease is validated on a certain day, and rents may be charged from a specific fund (a Chinese accounting term which means that fund is set aside for a specific purpose) or income before tax, and/or directly treated as an expense as condition warrants.

Accounting for The Use of Land for Remunerations

Although land in itself is not recognized as a commodity in China (in accordance with Marxist economic theory) more and more people realize that it represents a kind of scarce economic resource through which economic benefits may be gained

by properly employing it. According to the Tenth Revised Act to the Constitution passed by the Seventh National Congress on April 12, 1988, the ownership of land belongs to the State, but the right to use a specific tract of land is transferable. Therefore, for the right to use land there is a price which is subject to change in light of the law of supply and demand. Auctions for the right to use land have emerged in Shenzhen, Guangzhou, Shanghai, and Fuzhou since 1987. According to the present regulation, the successful bidder has the full rights to use the tract of land profitably within a designated period, including the right to resell and the right to mortgage when applying for a bank loan.

In line with Marxist theory, land itself should be excluded from the asset category, thus, the logical conclusion is that the right to use land as a commodity must be considered a kind of intangible asset. The acquisition cost of the right shall be recognized as the value of an intangible asset, and amortized during the contractual period.

What constitutes the acquisition cost has arisen as an issue. For example, there is a question of whether interest should be included in the acquisition cost when using a bank loan to acquire the right, especially if after acquisition the land is not put into use immediately. In the meantime, the Provisional Regulation of Tax on Land Usage in Cities and Towns of The People's Republic of China (valid as of November 1, 1988) was issued by the State Council. Accordingly thereafter, the usage of land is subject to both payments of remuneration and taxation. However, if the right to use land was acquired before the issuance of the regulation, fees charged by a local government would be treated as an item of expenses during the period in which they occurred.

Securities

In 1985 some Chinese academicians proposed that enterprises should be permitted either to issue stocks or to float bonds for obtaining long-term funds. After some experiments, the State Council in 1987 issued two official statements, 'Notice of Strengthening the Administration of Stocks and Bonds', and 'The Provisional Regulation of Enterprise Bonds', which legitimized the offering of securities by enterprises to the general public thereafter.

Stocks. Most of the corporations which issue stocks to the public are similar to the corporations in Western countries. Because a corporation comes from the reorganization or quasi-reorganization of the original enterprise(s), the corporation has a mixed ownership after issuance of stocks. This is a mixture of state ownership, collective ownership and private ownership. For example, when a state-owned enterprise is permitted to be reorganized into a corporation, the net assets should be properly assessed and attested by CPAs registered in China, and the amount determined by the CPAs as belonging to the State should be expressed in state-owned shares. The remaining shares should then be issued after approval by a local branch of the People's Bank of China through securities agencies.

At present, stock-issuing corporations have, as in Western countries, liabilities limited to the amount of total capital paid in, which is prescribed to be equal to the

amount of registered capital. In China stocks are issued at face value, occasionally with a premium.

So far, the emergence of corporations has raised two problems: one is whether proper asset evaluation should be based on historical cost or on replacement cost before stocks are issued; the other is how the fund sources (a Chinese accounting term which is similar to the German accounting term: passive) should be classified into liability and equity. The latter is now one of the most important issues which Chinese accountants have to cope with prudently in their practice.

Enterprise Bonds. For Chinese enterprises, it is a much more common practice to float bonds than to issue stocks even though bonds are issued to investors through securities agencies as well. Most enterprise bonds in China may be considered as debenture bonds, which are supported by trust responsibility of the issuing enterprises. Bonds usually mature in short periods, such as one to five years from the date of issuance. In China, enterprise bonds are generally issued at face value, without coupons attached, occasionally with a discount, and the matured value is equal to the face value plus interest accrued at maturity. To adjust to increasing price indexes of commodities, enterprise bonds have recently issued at a floating rate so as to attract more potential investors.

Accounting for bonds payable in China is different from that in the United States. According to the latest accounting regulation of the Ministry of Finance in April, 1989, in the case where the purpose of floating bonds is to replace obsolete fixed assets, the principal and interest of the bonds are to be charged from specific funds (mentioned above); if bonds are issued for financing key projects approved by the government, the principal and interest may be charged to income before tax with the approval of the authorities concerned. In present practice, callable bonds are rarely issued because no sinking funds have been established for outstanding bonds. To strengthen the administration of bond issues, a series of criteria for accrediting enterprises has been devised.

Accounting for Securities Investment. Issuance of securities by any enterprise is subject to approval either of the People's Bank of China or of its branches at the provincial level or of other financial institutes authorized by the People's Bank of China. The issuing enterprise must file its application attached with its license for operation, association of organization, feasibility study report, CPAs' verification report, and other related documents including financial statements of the prior two years. This procedure is also applicable to stock-issuing corporations.

Enterprises with surplus funds are now permitted to invest in such securities as stocks, enterprise bonds, and treasury bonds. To promote investment in securities, there are nine financial institutes which serve as security exchange counters through which enterprises and individuals may buy and sell outstanding securities at listed price. The exchange transactions are on the basis of cash; no future transactions are permitted. The price of securities partially reflects the changes of supply and demand.

It is clear that this is merely an informal security market. Although the government is encouraging enterprises to invest in securities, there is not a set of complete and coherent policies to be followed. Nevertheless, most managers prefer an investment

in fixed assets to one in securities because securities to them seem intangible and uncontrollable. It will take a long time for them to realize that an effective investment in securities is one of the most important factors in cash mobilization. Generally speaking, security markets in China are beginning to develop; the need to establish a security market where stocks and bonds are freely exchanged is presently on the agenda of economic structural reform. However, most Chinese accountants are unfamiliar with accounting for investment in securities. Today, Chinese accountants need to consider whether fluctuations in market prices of securities should be accounted for, when to recognize, and how to treat holding gains and losses. Occasionally, they have to deal with premium and discount of securities, and the implicitly accrued interest of bonds.

Business Combinations

In China, business combination is a term used in its broad sense. Enterprises may share their equity interest in other enterprises by making investments in them or by cooperating with them by providing raw materials, components, and technology, and/or by establishing a new joint venture. In addition, business combinations may emerge either in the form of a merger, where one or more enterprises lose their identity after merger, or in the form of a consolidation, where several enterprises are combined into a new unit, or several enterprises become subsidiaries of a newly established parent enterprise.

Mergers first appeared in China in 1986. The main accounting features seen in the process of merging are the evaluation of assets, especially that of non-monetary assets involved in business combination. The assets may be evaluated either at their carrying value or at negotiated market prices, and/or at the planning prices set by the State. Proper measurement of assets is foremost in importance to all parties to secure fair income distribution after the combination.

In the present practice of combination, the transfer price of property rights of a certain enterprise is usually determined by the sum of the fair values of the individual identifiable assets and liabilities rather than by the value of the enterprise as a whole. Goodwill at this time is considered alien to business combinations.

Financial statements of joint ventures without foreign investments are subject to examination by local tax authorities, but income from a joint venture is distributed to all parties before taxes are levied. As equity investors, all parties will bear their respective share of losses and have the responsibility of liquidating liabilities when joint ventures are bankrupt or dissolved. In practice, most joint ventures are very similar to partnerships in Western countries; the only difference is that the investors in those joint ventures are enterprises rather than individual persons.

Enterprise Bankruptcy

The Enterprise Bankruptcy Law was passed in December 1986, by the Standing Committee of the National People's Congress of PRC, and became effective in November, 1988, when the Enterprise Law had been in effect for three months. Under the premise that an enterprise should be run as an independent entity, benefitted by its own profit, and responsible for its own losses. If a particular enterprise fails, it

will be declared to be bankrupt under the consensus of all creditors according to the law.

Statistical data show that by the end of June, 1988, a total of 6369 enterprises had a deficit, with total losses of 364 billion RMB yuans. The number of such enterprises accounted for 17 percent of all state-owned enterprises in China. The need for liquidation accounting to cope with such as a situation is evident. In fact, a number of enterprises were actually in bankruptcy before the promulgation of the law.

Problems arising from enterprise bankruptcy are the valuation of assets and liabilities at the beginning of liquidation, the reporting of the financial position to all parties concerned, and the preparation of financial statements disclosing the result of liquidation for creditors and owners. In light of the law, the order of priority in discharging obligations during the liquidating process is stipulated as follows: (1) expenses occurred during the liquidating period; (2) unpaid wages and salaries and labor insurance of employee; (3) taxes payable; and (4) debts.

Intangible Assets

The concept of intangible assets was not accepted until technology, patents, copyrights, trademarks, and scientific know-how were commercialized in China. In addition, after the right to use land became an object of exchange permitting its purchase and sale, the acquired right is included in intangible assets (see above). Generally speaking, intangible assets can be classified into two categories according to different methods of acquisition: for example, patents acquired from an outside party, and patents developed internally. Intangible assets can also be classified according to different criteria, but, as mentioned above, goodwill has not appeared in accounting practice in China until now because Chinese socialist economic theory insists that any enterprise not be regarded as a kind of commodity.

In the wake of the latest accounting regulation of the Ministry of Finance in April 1989, all intangible assets should properly be accounted for and publicly reported in financial statements. In contrast, no single item of intangible assets was mentioned in the accounting regulation for state-owned industrial enterprises in previous decades. Although the capitalization of various items of intangible assets and their subsequent amortization are in the initial stage of development, the idea that intangible assets are one kind of economic resource is deeply rooted among enterprise managers and accountants in China. They pay more attention to the measurement of intangible assets, as well as to the role in the growth of national economy.

Accounting for Foreign Exchange Transactions

Enterprises with foreign investments is a phrase used in its broad sense, including equity joint ventures, contractual joint ventures, and exclusively foreign-owned enterprises. Enterprises with foreign investments are permitted to hold their assets and liabilities in foreign currency but have to translate them into an amount denominated in functional currency, for example, RMB yuans, at their historical exchange rate prior to January 1, 1988.

In accordance with the accounting regulation issued by the Ministry of Finance in 1985, which was effective until January 1, 1988, foreign exchange gains and losses

were to be recognized in the accounts when realized. Regardless of the fluctuation of exchange rates, the RMB balances of current assets and liabilities in foreign currency cannot be adjusted. For foreign currency loans, exchange gains and losses could only be recognized upon repayment. For accounts receivable and/or notes receivable in foreign currency arising from sales and/or service, exchange gains and losses could only be recognized upon actual collection of those accounts. For accounts payable, exchange gains and losses could only be recognized upon payment. In practice there was a wide range of exchange gains and losses in a number of enterprises. In extreme cases, some enterprises' exchange gains and losses thus determined were greater than their annual general and administrative expenses.

The vital weakness of the foregoing treatment is that the impact of exchange rate fluctuations on operating results could not be reflected in accounts and financial statements in a timely manner in spite of the fact that a floating rate system exists in Chinese economic life.

To remedy this situation, the Ministry of Finance, in its supplementary regulation of foreign exchange gains and losses effective in January 1, 1988, replaced the conservative treatment described above with a relatively realistic approach. In line with the new regulation, enterprises concerned can adjust the RMB balances of assets and liabilities in foreign currency at the year-end exchange rate stipulated by the State Administration of Exchange Control (SAEC), after an agreement has been reached with the local tax authorities. The differences arising from adjustments of book rate to year-end rate shall be carried in a new account, 'Foreign Exchange Gains and Losses pending Amortization', which will be amortized during the period agreed upon between enterprises concerned and the local tax authorities. Generally this period is not longer than five years. The balance of the account, 'Foreign Exchange Gains and Losses pending Amortization', shall appear on the balance sheet either as 'Deferred Charges' or as 'Deferred Credits'.

Since the Bank of China introduced several financial instruments from the international financial markets, enterprises with foreign investments and a number of state-owned enterprises have been permitted to engage in these transactions. Under the floating exchange rate system, the purpose of undertaking those transactions is to prevent operating results from being impaired by extraordinary exchange losses rather than to pursue extra gains. However, foreign exchange risk management is unfamiliar to most managers and accountants and it has become a new topic of accounting and reporting in China. There are several alternatives for enterprises in practicing foreign exchange risk management. These alternatives are:

(1) to engage in spot transactions with local branches of the Bank of China or other approved financial institutes;

(2) to buy futures to cover forthcoming foreign exchange payments, and/or to sell futures to dispose of expected foreign exchange receipts;

(3) to engage in swap transactions;

(4) to purchase an option to obtain the right to buy or sell a certain amount of stipulated foreign currency at a fixed rate during a future period;

(5) to borrow basket foreign exchange, including in one package both high- and low-risk currencies.

In addition, there are several special foreign exchange centers approved by the government where foreign currencies, especially U.S. dollars, are exchanged for RMB at a rate which depends on the law of supply and demand under the supervision of local branches of the SAEC. This rate is usually much higher than the official rate. This kind of transaction presents a specific problem because the RMB balance of a certain amount of foreign currency will be based on market rate rather than on the official rate.

New Issues in Accounting Research

Many Chinese practitioners and academicians are inspired by the dynamic changes in accounting practice and the socio-economic environment. They have reached the consensus that many fundamental concepts, such as accounting assumptions, elements, and principles, should be re-examined and redefined in response to changes in environment.

Accounting Assumptions

Prior to 1987, an accounting assumption was considered a term imported from Western countries. Now this term has been accepted by most Chinese accountants. It is noteworthy that the accounting entity is the major issue in this subject.

Until the late seventies the economy of China was characterized by central planning in which the central government set the plan for the main state-owned enterprises with regard to what to produce, how many to produce, and for whom to produce. The economic resources necessary for production were directly allocated by the central government. All products were actually acquired by the central government, and all profits earned through operation were submitted to the State Treasury for appropriation. In a word, the whole economy acted as one huge enterprise, while individual enterprises were similar to a profit center.

Past experience has shown that the concentration of too much planning power within the central government would give rise to inefficiencies in the production and distribution of goods and services and would frustrate the initiatives of the management and employees of the state-owned enterprises. In an effort to remedy this situation, the ultimate aim of invigorating the state-owned enterprises is to make them act as independent business entities and assume full responsibility for their profits and losses. This aim has been emphasized again and again. Logically, the need to recognize capital which a particular enterprise owns, and the need to distinguish what the enterprise should be responsible for from what the enterprise should not are self-evident. Thus, the accounting entity, one of the accounting assumptions, seems ready to emerge as a result of the national economic structural reform in China.

Furthermore, in the current practice of business combinations, no consolidation of financial statements is required even though a parent–subsidiary relationship exits. This phenomenon should be attributed to the inconsistency of various measures which have been employed to invigorate enterprises. However, it is possible that the preparation of consolidated financial statements may be required in the near future.

With the changes in the environment, the assumption of the accounting entity will be well developed.

Accounting Elements

Asset. Chinese accounting equation was characterized by fund applications being equal to fund sources. Under the fund applications, there are three categories of assets: fixed, current, and specific assets. Until now, whether in accounting textbooks or in accounting practice, assets are explicable as a synonym of fund applications; no one has given a clear explanation how an asset should be defined. Some academicians argue that two terms, fund and fund application, were cyclically defined in nature; logically the latter is an extension of the former. They hold that 'fund' is a term used in its broad sense, while asset is an essential element in accounting and reporting and should be well defined. They clarify that, first and foremost, assets are economic resources which will bring economic benefits in the future through their use.

Second, ownership is not the sole feature by which accountants can judge whether a specific item of resources should be treated as an asset. With the development of leasing transactions, most accountants have realized that if assets and liabilities are not properly reported in financial statements, the users of information will misunderstand the financial position and operating results. Fortunately, the latest accounting regulation, issued by the Ministry of Finance in April 1989, has embodied this idea.

Third, the fact that intellectual properties have been commercialized reminds us that 'physical existence' is not a satisfactory criterion for identifying an item of resources as an asset, as well as for distinguishing a tangible asset from an intangible asset. Some academicians believe that the major characteristic of an intangible asset is the high degree of uncertainty concerning the future benefits that are to be received from its employment. Fortunately, the latest accounting regulation (mentioned above) has required enterprises to report their intangible assets.

Liability and Equity. Under the fund sources, there are three categories: fixed, current, and specific funds. These are very difficult to reclassify explicitly into liability and owner's equity. Some academicians advocate that this kind of classification is in conflict with the objective of invigorating enterprises and has become obsolete in the process of reform. They argue that the foregoing classification of fund sources is merely a functional classification of operating funds. Both at present and in the predictable near future, investors and potential investors are concerned with the capital structure, solvency, investment risk and profitability rather than with conformity with the three kinds of fund sources. To draw a clear frontier between liability and equity, specifically between short-term liability and long-term liability, is an essential condition.

In dealing with problems in insolvency and bankruptcy, it is also essential to distinguish short-term liability from long-term liability and to separate a paid-in fund from a retained fund. Otherwise it is difficult to identify that a certain enterprise is on the brink of bankruptcy depending on the information contained in financial

statements. Differentiating between liability and equity is useful in evaluating enterprises' performance and in controlling overheated investment demand, a phenomenon peculiar to China. A mixture of liability and equity and an interchange of liability and equity are opposed to efforts to correct this overheated investment demand.

Income. Income is an indicator that measures the overall effectiveness of an enterprise. Income measurement is concerned not only with the asset evaluation, but also with the recognition of revenues and expenses. It is the core of financial accounting theory and practice. At present, the most difficult problem is that accounting income can not fairly represent the real operating result of an enterprise because of the interference of various factors, such as mandatory planning from the government, breaches of contracts, and changes in governmental policies related to finance, tax, investment, pricing, credit, and wages and salaries. The most important factor is that the general price level has been increasing at an average annual rate of approximately 8 percent, yet the specific price levels are increasing more significantly, sometime even reaching 35 percent. Although the Chinese government has allowed the market mechanism to play a role to some extent, it will take a long time for market forces in China to take effect completely.

In such a situation, the traditional historical cost accounting model is now facing more and more criticism. Some Chinese academicians have advocated adjusting financial statements in line with the general price level, while some hold that current replacement cost should supersede historical cost. Meanwhile, others believe that some modifications of the basis of historical cost will serve the purpose by employing the last-in-first-out method of inventory evaluation and accelerated depreciation methods for fixed assets.

Although no consensus has been reached among academicians and practitioners, some enterprises have re-evaluated their fixed assets, and some under certain conditions have appreciated their inventory. All differences were accounted for as a capital adjustment. The question of whether it is necessary to redefine accounting income and to propose a set of measurement standards concerned has been listed on the agenda by the Accounting Society of China (ASC).

Accounting Objectives

Currently, accounting objectives which determine the other properties (such as qualitative characteristics of accounting information) of accounting are a subject of paramount importance. Most academicians and practitioners believe that accounting objectives are changeable and affected by changes in the socio-economic environment in which accounting takes place, and that accounting reform is designed to promote the progress of economic structural reform rather than to obstruct it. In the process of economic structural reform, they find that, (1) users of accounting information are increasing, (2) more attention is being given to the relevance of accounting information to both macro- and micro-economic management, and (3) the contradiction between the advance of reform and the lag of accounting regulations become remarkably obvious.

Enlightened by these facts, some Chinese academicians are concerned with who users of accounting information are, what kinds of information they need, how much information accounting is able to provide, and how to provide it. The following problems have been identified:

(1) Is it necessary to prepare general purpose financial statements? As users of accounting information are increasing, current financial statements may not satisfy different users because different users require different information. What accounting can do is to meet the common requirements of different users. Therefore, to prepare financial statements for general purposes is the best way to serve users. However, whether there is a necessity and a possibility to prepare general purpose financial statements in practice in China depends on the direction and speed of economic structural reform in the near future.

(2) Should financial statement be open to the public? Competition among enterprises has been encouraged. This may allow the rational allocation of economic resources to be realized, and the effectiveness of enterprises to be improved. It is crucial for every enterprise to have an equal opportunity in this competition to get essential information, especially accounting information related to decision-making. Some Chinese academicians advocate that it is necessary to have financial statements open to the public in a proper manner.

(3) How should financial statements be prepared? Preparing general purpose financial statements requires a set of accounting standards to deal with a variety of business transactions professionally, only then can financial statements be compared with each other and serve the general purpose. Most Chinese academicians and practitioners have realized that, with the development of a market mechanism, the increasing involvement in international economic affairs, and the diversification of business transactions, existing uniform accounting regulations seem to be too rigid and prescriptive for the administration of accounting affairs nationally, especially in a country as vast as China with an unevenly developing national economy. Therefore, a consensus on the necessity to establish a set of coherent, consistent and coordinated accounting standards has been reached.

Accounting Standards

The terms, accounting standards and accounting principles are used interchangeably in China because both carry almost the same meaning in Chinese. Under the guidance of the Accounting Society of China (ASC), concrete measures have been taken with the aim of establishing accounting standards. The Research Group on Fundamental Accounting Theory and Accounting Standards was created by the ASC in 1988 with 18 members selected from accounting professors, public and enterprise accountants, auditors from government agencies, statisticians, and officials from the Ministry of Finance. The Group will devote itself to making in-depth studies and to drafting Suggestions for Accounting Standards, or where Suggestions are not warranted, to preparing Research Reports. Research conclusions will be reviewed by authoritative accounting administrative bodies.

The policy followed by the ASC is that accounting standards setting should be parallel to the study of fundamental accounting theories, such as objectives, elements, essence and nature of accounting, accounting measurement criteria, and terminologies. Accounting standards should be developed to address different accounting issues.

The first package of research projects initiated by the Group is as follows:

(1) Suggestions for Accounting Standards:
  a. the qualitative characteristics of accounting information;
  b. the truthfulness of accounting information;
  c. supplementary information for price level adjustments in financial statements;
  d. foreign exchange transactions.

(2) Research Report:
  a. accounting for stock corporations.

Other Developments

Research Groups on Accounting

To establish a consistent, coherent and coordinated framework of accounting theory and to play a more active role in the process of economic structural reform, the ASC has decided to initiate a series of studies and has established the following Research Groups, which serve as task forces under the direction of the ASC.

Research Group on Accounting Reform. This group studies the strategies and tactics of accounting reform in the new environment in which the market mechanism will play a more active role. The first Group meeting was held in July 1988. The major topic was the current situation and prospects of responsibility accounting. The papers proposed at the meeting were edited and compiled into an anthology entitled: 'Responsibility Accounting: Theory and Practice'.

Research Group on Financial Management. This group is concerned with emerging financial problems in enterprises and the relationship between enterprises and the State. The first Group meeting was held at the end of 1987. The major topic was financial problems arising from business operation under the contractual responsibility system with special attention to the income distribution between the State and the enterprises. Income tax and net asset measurement were another main concern.

Research Group on Fundamental Accounting Theory and Accounting Standards. (see section on Accounting Standards above.)

Research Group on Accounting Education. This group considers issues and developments in collegiate accounting education, professional accounting education, and training programs for accounting staff (its activities will be mentioned later).

Research Group on Computerized Accounting. This group studies the development of standard accounting software and electronic data processing as a part of a

management information system. The Group claims that systematic development and internal control of computerized accounting are imperative at present, while staff training program on computerized accounting must be developed properly.

Research Group on Accounting History. This group studies the history of accounting in China and in other countries. The Group has decided to give more attention to the evolution of accounting methodology worldwide.

Research Group on International Accounting. This group studies accounting in Western countries and in Eastern European countries, international accounting standards, and international accounting organizations. The Group issued its research program in 1988, which included 30 subjects, such as special topics of foreign financial accounting, accounting theories in foreign countries, comparative accounting, and accounting for enterprises with foreign investment. Other accounting issues, such as triple-entry book-keeping, value-added statements, and accounting for transnational enterprises, were also covered.

The China Institute of Certified Public Accountants (CICPA)

After the Regulation of the People's Republic of China on Certified Public Accountants (CPAs) became effective on October l, 1986, the first Regional Institute of Certified Public Accountants was founded in Shanghai in April 1987 with an initial membership of 148 CPAs from four accounting firms. Independence, fairness, and objectivity were announced as fundamental ethical and professional standards. A CPA must maintain confidentiality of data and information obtained and accessed in performing service. Moreover, a set of standard auditing procedures is under consideration.

CICPA, was founded in November 1988, to be in charge of all affairs related to CPAs, such as CPA registration, registration of CPA firms, and CPA examinations. CPAs registered in China are members of CICPA, while outstanding accounting professors, academicians, and practitioners may become members of CICPA upon recommendation and approval by the Executive Board of CICPA. Local CPA firms are also members of CICPA, and local institutes of CPAs are considered as local organizations of CICPA.

In light of Article 6 of the Regulation of the PRC on Certified Public Accountants promulgated by the State council in 1986, each candidate sitting for the CPA examination must be a Chinese citizen and must be a college graduate or a person with an equivalent academic education and have worked in the accounting or auditing field for more than three years.

An applicant for registration as a CPA can waive the examination requirement and qualify through an evaluation process. The applicant must be either a senior accountant, an accounting professor and/or associate professor, a research fellow or an associate fellow with experience in accounting practice. Some individuals with a college or equivalent education and with 20 years of experience in the financial accounting field also may apply.

The CPA examination is directed, organized, and supervised on a uniform basis by a national examination board approved by the Ministry of Finance. The examination

may cover accounting, financial management, auditing, economic laws, and relevant regulations. A division of CICPA was established to make general arrangements for the examination which will be held either once a year or every two years. Accountants and staff of CPA firms and other accounting practitioners are encouraged to take the examination. No staff working in government agencies may be registered to practice as a Certified Public Accountant.

Developments in Accounting Education

A program of accounting education reform is being undertaken by some leading Chinese universities, in response to the economic structural reform, to foster more competent and dedicated accountants. The ideology of teaching has changed from mainly imparting accounting knowledge to equipping the students with:

(1) the ability to identify, analyze, and solve problems;
(2) the ability to think logically and judge critically;
(3) the ability to adapt to dynamic situations;
(4) the ability to organize and coordinate;
(5) a dedicated attitude toward the accounting course.

The objectives of accounting education mentioned above were explicitly stated by a well-known professor, Er-Ying Lou, in his paper presented in the Sixth International Conference on Accounting Education in 1987 and was accepted by Chinese educators nationally. Several measures have been employed to achieve these objectives, including the following:

(1) courses related to business administration are increased materially to broaden the students' vision;
(2) case studies are employed in classroom teaching
(3) within a four-year undergraduate program, students are required to join two social surveys in order to familiarize themselves with real-world situations
(4) textbooks have been written for the new core courses.

The Research Group on Accounting Education held its first meeting in 1988, discussing textbook reform and a revision of the accounting curriculum. The consensus was reached that the accounting curriculum should reflect the changes in economic life, and English teaching should be strengthened. Most educators agree that the idea of a college or university performing the triple functions – communicating knowledge to students, expanding the content of the accounting discipline, and interacting in a direct relationship with society – has been the most important change in accounting education in recent years.

In 1989, a new major, international accounting, has been established in the Department of Accounting at Shanghai University of Finance and Economics (SUFE). Accounting courses there will be taught completely in English with the textbooks currently used in the USA and UK. After graduation, these students may be hired by Chinese enterprises with foreign investment, transnational corporations, and government agencies dealing with foreign affairs concerned with accounting.

During 1988, the quality of curriculum, graduates, faculty strength, and other educational activities of the accounting department at universities and colleges nationwide were evaluated by the State Education Committee. Two departments of accounting were highly ranked and accredited with the honor of being leading ones: the Department of Accounting at SUFE, and the Department of Accounting at Xiamen University

Impact of Environment on the Evolution of Accounting

In a behavioral sense, accounting is generally perceived as an environmentally-determined activity. Accounting continually reacts to requirements of the environment in which accounting functions in accordance with its long history. With the changes in the socio-economic environment, new users of accounting information have emerged, and require new accounting service. Thus accounting has had to adapt itself to new circumstances. Some primary environmental events in China are identified below to offer an explanation for some aspects of accounting developments.

Impact of the Social and Political Environment

Since 1979, the policy of reforming the economic structure and the policy of opening to the outside world have exerted an enormous influence on the development of the Chinese national economy. The lessons learned from this reform indicated that it is necessary to persist in a comprehensive reform which not only covers economic but also involves social and political aspects of the society. Otherwise the reform will stay at the first stage.

It is noteworthy that more attention has been given to modernization by the Chinese Communist Party since 1984. To promote the development of the national economy and to raise economic effectiveness should be at the center of the Party's consideration of all problems and the basic criteria for evaluating performances. It is obvious that in a society where economic development was relegated to a second position, where performances of enterprises was not evaluated on the basis of economic effectiveness, and where income was distributed according to administrative means rather than on the basis of performance or capital invested, it was natural that accounting should be a nonentity. However, at present Chinese accountants are encouraged to provide more service to the society, which in turn stimulates accounting development.

Adherence to the policy of opening to the outside world also has had a profound influence on the recent development of accounting. The total amount of foreign capital used by China had reached more than \$41 billion at the end of 1988, of which \$29.5 billion were from foreign loans. In business dealing with foreigners, accounting inevitably serves as a business language in communication. Accounting conventions and principles observed by international business community have a great influence on Chinese accounting. Some evidence for this can be found in the accounting regulations for enterprises with foreign investment and even in the accounting regulations for state-owned enterprises. Extensive exchanges between

Chinese academicians, practitioners, and their foreign counterparts also exert an influence on the development of Chinese accounting.

Impact of the Economic Environment

In reforming its economic structure, China has allowed private ownership to exist and develop quickly and has expanded the commodity market for essential factors of production. It is generally accepted that these phenomena are not peculiar to capitalism, and are bound to appear in socialism as long as it is recognized that a socialist economy is also a commodity economy.

The Enterprise Should be an Independent Business Entity. It is recognized that enterprises owned by the 'entire people' (a phrase used in the official documents) cannot be operated by the 'entire people'. In order to vitalize enterprises, it is essential to separate ownership from management, to give the decision-makers power to operate the business, and to protect the lawful rights and interests which enterprises should have, so that enterprises are able to make decisions and to strive to improve their economic effectiveness. Even if a particular enterprise declares bankruptcy, the owners will carry limited responsibility. Business entities thus established with their own rights and interests enrich the assumption of accounting entities with its full meaning. Changes in economic policies give rise to changes in accounting assumptions and in accounting practice. Since profitability became a main concern of business management, accounting information is likely to be used extensively in decision-making. Therefore, it is required to develop necessary qualitative characteristics of information, such as decision usefulness, reliability, and timeliness. Management accounting which deals with planning, control and decision-making is attracting attention and is well developed.

The Market is a Whole and Open Market. It is generally accepted that a socialist commodity market should be not only a market for consumer goods, but also a market for essential factors of production, such as funds (capital), labor, technology, information and real estate. A socialist commodity market should be competitive and open. A monopolized and closed market provides no incentive for commodity producers to improve their efficiency, and a self-enclosed market promotes neither a rational division of labor at home nor international trade abroad. To establish a socialist commodity market, China is gradually building a framework in which the State sets the price of a few vital commodities and services while leaving the remainder to be determined by the law of supply and demand. However, significant price changes have raised some accounting problems related to asset measurement and income determination which Chinese accountants did not seriously consider before.

Allowing Private Ownership to Develop. China believes that even though public ownership should keep a dominant position in the primary stage of socialism, the development of private ownership is a necessary supplement to the national economy. Under the guidance of this ideology, in the sectors of national economy that are

relatively undeveloped and where public ownership is in far from a dominant position, all collective and private business entities in both rural and urban areas are strongly encouraged. In different regions, the proportions of different ownerships are allowed to vary. Foremost, a mixture of all types of ownership has appeared in some medium and large enterprises which have changed into stock-issuing corporations. At the same time, it is admitted that enterprises with foreign investments also constitute a necessary supplement to the socialist national economy.

China has stipulated a series of laws and regulations to protect the lawful rights and interests of foreign investors and is making efforts to improve the investment environment for foreign businessmen. The diversification of economic activities is a challenge to the high uniformity of accounting regulations which are hardly workable under the new circumstances due to being rigid and detailed. To cope with this situation, Chine needs to develop a set of accounting standards to provide guidance for accounting practice.

Diversification of Income Distribution. China feels that the ways of distributing wealth among people in the primary stage of socialism should be diversified. In addition to the main way, i.e., to each according to his/her work, other ways have been proposed. When enterprises issue bonds to raise funds, bonds investors may receive interests; when stocks are issued, shareholders may receive income in the form of dividends; enterprise managers may receive additional income to compensate for risk-taking; and owners of private enterprises employing a number of workers may receive income from the business operation. Income of these types is allowed as long as it is acquired legally. Accountants are therefore asked to account for bond and stock transactions. With the appearance of corporations and debt securities, financial statements need to be made public and to meet needs of outside information users. Furthermore, independent auditing becomes a logical necessity as well.

Encouraging Business Combinations. Business combinations are recognized to be an inevitable trend in a campaign to speed economic development. Under the ideology of a self-enclosed national and regional economy, the irrational holding of fixed assets and poor management have resulted in both a restriction of money supply and a low rate of return on investment. According to unofficial statistics, approximately 200 billion RMB yuans of fixed assets have been left idle, which amounts to 33 percent of the total industrial fixed assets in China. Business combination is an effective means of making full use of these idle economic resources. The rational flow of such essential factors of production as trained workers, funds, and technology through business combination across different regions has resulted in the appearance of parent–subsidiary relationships. Asset evaluation and consolidation of financial statements are attracting Chinese accountants' attention.

Impact of the Cultural Environment

With adherence to the policy of opening to the outside world, cultural exchanges between China and foreign countries have markedly increased. Many new ideologies

and different ways of thinking from foreign countries have shocked many Chinese academicians and practitioners, especially the younger generation. More and more researchers have realized that the emancipation of the mind is one of the most important foundations enabling them to explore truth. Thus, they intend to discard outmoded conventions and obsolete methodologies. In this new historical situation, some fundamental principles guiding socialist modernization have been restudied. Marxism is considered a theory subject to development in the wake of a different environment. Socialism is thought to have no standard model to be followed. Hence comes the theory of the 'Primary Stage of Socialism'. Many accounting developments enumerated in the first section of this paper are the results of those new ideas.

Facing rapid changes in the environment, more and more Chinese academicians and practitioners realized that accounting practice can by no means stand still and that they must keep pace with developments in society and serve its need. Now Chinese academicians and practitioners are seeking solutions to new problems and issues emerging within the economic structural reform. With the aim of establishing a framework of accounting theory and method with Chinese characteristics, the following efforts have been made by Chinese accountants:

(1) Chinese accountants are no longer satisfied with the knowledge generated from practice and accumulated within the accounting discipline but are keen to enrich themselves with the knowledge and ideas from related disciplines, such as economics, sociology, behavioral science, and management science. In undertaking research, they are employing various methodologies to serve their needs.
(2) Many fundamental issues concerning objectives, assumptions, principles, and elements of accounting are now being reconsidered and restudied. Chinese accountants are active in exploring these issues from different perspectives with different opinions. For example, the debate between the school of 'Management Activities' and the school of 'Information System', with regard to the essence of accounting, has proved beneficial. It is believed that there should be no uniform thought dominating academic research.
(3) Many accounting researchers, especially younger ones, are no longer satisfied with accounting theory which mainly explains current governmental policies and regulations. They wish to move away from the traditional position and to strive to undertake scientific investigation on the essence of accounting as well as its role in economic structural reform, and the role of accounting theory in enlightening accounting practice, and stipulating accounting regulations.

More and more academicians and practitioners have realized that the influence of traditional thought emanating from a small-scale rural economy, the pernicious ideology of a feudal society, and the rigid Soviet model is so inflexible that it continues to be harmful to the advance of reform, as well as to people's ways of thinking and behavior. Facing a changing world, Chinese accountants have not only to expand their common body of knowledge, but also to discard prejudices which were shaped during the past several decades. The shift of ideology is a painful thing, but it is the only way to keep pace with the development of society.

Conclusion

In concluding this article, the authors would like to note that, since 1987, rapid changes have taken place in Chinese accounting theory and practice. As long as economic structural reform advances successfully, the trend that management, creditors and investors rather than governmental agencies will become the main users of accounting information will be inevitable. Accounting practice will develop towards internationalization even though some Chinese characteristics will still remain.

The extent to which the economic structural reform will develop, however, is so uncertain that there is no rigid predetermined structure of thought to be followed. With such an understanding, Chinese accountants are launching an ideological revolution by reconceptualizing the significance of accounting in the current situation and absorbing useful ideas, methods and practices from other countries.

No one can expect to know exactly how fast the evolution of Chinese accounting will progress in the near future because the current political situation is vague. The authors believe that increasing internationalization will be indispensable as long as China persists in the policy of opening to the outside world.

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The Status of Accounting and its Environment in West Germany: An Overview

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Key words: Accounting; Standardization in accounting; Accounting environment; Accounting uniformity

Abstract: *This paper discusses the relationship between the underlying structure of a Nation's economy and its accounting and reveals how the national environment influences the accounting practices in a specific leading country in Europe, West Germany. Accounting appears to be influenced by several environmental factors: political and economic systems, legal and taxation structures, and the national accounting profession. These elements of the West German environment and their influence on accounting are examined. This paper also discusses the changing environment in West Germany. Much of the information presented in this paper resulted from personal interviews with senior partners of major accounting firms and academics, government administrators in West Germany, and with the Director of the Institute der Wirtschaftsprufer.*

Introduction

To the American accountant, student, or user of German financial statements, West German accounting rules and the accompanying rigid legal requirements may seem very difficult. The style of preparing financial reports in this country and the use of conservatism in accounting may seem to be confusing.

As a dynamic phenomenon, accounting changes in response to the changes in its environment. This article focuses on the distinct features of accounting in a vital European country, West Germany. The article first discusses several environmental features of the political and economic background of West Germany, including the types of business organizations in the country, its taxation laws, its corporation laws, and the impact of and response to the directives of the European Economic

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Community (EEC). The main elements of standardization, including the chart of accounts, valuation and measurement rules, and the structure of financial statements, are then presented. The changes related to EEC harmonization efforts are discussed, and future challenges are suggested.

Political and Economic Background

The West German economy has a marked capitalist orientation with most commercial and industrial companies privately owned. Two significant features of the German economy are the power, and to some extent, the control that the major banks exert on the financial system of the country, as well as their influence. Unlike those of the Anglo-American system, banks in West Germany provide a complete range of financial services. The banks, rather than individual investment companies, conduct most stock exchange dealings and provide the substantial part of the national industry's capital needs. A bank in West Germany is, in fact, a combination of commercial bank, investment bank and, investment trust (Abel, 1971, p. 33). The *Bundesbank* (Central Bank) supervises the banking system, and the Federal Bank Supervisory Agency controls all banking activities.

The Banks invest in both commercial and industrial companies. The supervisory boards of most large companies include voting representatives from banks (Lafferty, 1975, p. 42). As a result of their dominant role on these boards, the banks have their own channels from which to obtain any type of information they need (e.g., banks have their own audit firms) and to conduct inside trading. Therefore, little pressure has been exerted to increase the usefulness of published financial statements in West Germany to a wider range of users until recently. Consequently, different parties, including trade unions, have criticized the powerful position held by banks, especially *Deutsche Bank* AG, the largest bank, and the impact they have on the West German economy.

In addition to controlling the domestic market, *Deutsche Bank* has entered the international market through a series of major foreign acquisitions. In the past year, *Deutsche Bank* has been quietly buying property near its West Berlin subsidiary. It is expected eventually to re-establish its headquarters in Berlin, where it was based before World War II.

While this article was under revision, *Deutsche Bank* offered approximately $1.41 billion for 95 percent of Morgan Grenfell Group of Great Britain. According to *The Wall Street Journal*, this would be the world's largest acquisition by an investment bank (Rustin and Browning, 1989, p. 1).

Germany has no free capital market similar to that of the United States. The German stock exchange is controlled by the government: dealing in securities is primarily conducted by banks. The stock exchange thus has little effect on accounting. Very recently, however, some foreign investors have begun to invest in West Germany, and this drove German stock indexes to record highs. In another new development, the *Bundesbank* dropped its longstanding ban on West German banks underwriting foreign currency debt for domestic borrowers. This shift will provide a primary market for non-mark, fixed-income securities in West Germany (Roth, 1990, p. A4).

In so doing, the *Bundesbank* has allowed other currencies to come into direct competition with the hitherto protected West German debt market.

Types of Business Organizations

The two main types of company in West Germany are the *Aktiengesellschaft* (AG), often called 'stock corporation,' equivalent to the U.S. public company, and the *Gesellschaft mit beschrañkter Haftung* (GmbH), similar to a private limited company. Other types of German companies are the limited and unlimited partnerships and different combinations of each.

Both the AG and GmbH are joint stock companies, as opposed to partnerships. The GmbH is the most popular form of company, but AG companies are more important. They are governed by the Corporation Law of 1965, the GmbH Act of 1980, and the newly enacted Handelsgesetzbuch (HGB) law of 1985..

The number of AG companies dropped from 2530 in 1965 to 2271 by the end of 1972 and to 1875 by 31 December 1982. This drop was due basically to mergers. The number of registered GmbHs increased from 50 275 in 1965 to more than 100 000 by the end of 1972 and to 250 000 by 31 December 1982 (Statistisches Jahrbuch, 1983, p. 115).

Taxation Laws

In West Germany, the impact of taxation laws on accounting is very significant. The two very influential tax laws that regulate accounting are the income tax law (EStG) and the income tax directives (EStR). West Germany requires that taxable profit must be derived from earnings reported in published accounts and that any particular accounting treatments claimed for tax purposes must be shown in the published reports. The impact of the provisions of the tax law causes an additional difficulty for the German accounting practice. Accountants are required to comply with the country's taxation rules, which change frequently.

Many detailed valuation rules and some book-keeping procedures are prescribed by tax laws and regulations. For example, the lowest of cost, replacement cost, or net realizable value must be used in valuing fixed assets. The same is applicable to inventories, and the weighted-average method is also permitted. For depreciation, the two allowable methods are the straight-line basis and the reducing balance method. Because the value stated in the published balance sheet determines the results for tax purposes, nearly all tax-allowed special depreciation also affects the published balance sheet (Langer, 1989, p. 11).

In calculating a company's profit, tax authorities are more concerned with the balance sheet than with the income statement. The tax law defines profit as 'the difference between business assets at the end of the year and the business assets at the end of the previous year' (Benny, 1975, p. 121). This means that valuation of items in the balance sheet is of great interest to the tax authorities.

Corporation tax is calculated using a separate balance sheet called the *Steuerbilanz* (tax balance sheet). It must be prepared in accordance with the tax regulations, which are in fact as effective as the legal accounting requirements. The *Handelsbilanz* (published balance sheet) is usually used as a basis for preparing this balance. Thus, the published balance sheet cannot show a higher valuation than that shown on the tax balance sheet. Generally speaking, companies do not show a large difference in the profit shown in the published accounts as compared with those prepared for tax purposes.

Although tax authorities usually audit the annual accounts of companies, it sometimes takes several years before the authorities are able to examine the accounts of every company. The audit by tax authorities is conducted thoroughly and covers compliance with taxation requirements as well as the company's activities, including book-keeping.

Tax rates in West Germany are high in comparison with other countries, and it has special types of tax liabilities. Generally speaking, companies are subject to two types of taxes: *Körperschaftstener* (corporation tax) and *Gewerbesteuer* (trade tax). The tax rate for companies is 56 percent (to be reduced to 50 percent in 1990). This rate is based on the imputation system resulting in a net 36 percent rate in so far as the profits are distributed (Rowland, 1989, p. 88).

Tax returns are required to be filed annually and are due on May 31. Income must be declared on a calendar-year basis. Tax is normally payable on a monthly basis by the tenth day of the following month. A payment extension of one month may be requested by making a one-month advance payment (Rowland, 1989, p. 100).

The Corporation Laws

Accounting regulation in Germany is highly politicized. The 'legalistic' mode for regulating accounting, developed in the nineteenth century (Gallhofer, 1989, p. 14-15), attempts to cover all eventualities. The HGB Law of 1985, the *Aktiengesetz* (Corporation Law of 1965), the *Handelsgesetzbuch* (Commercial Code), and *Ordnungsmässige Buchfürhrung* (principles of proper book-keeping) contain rigid regulations relating to accounting principles, valuation rules, income measurement, and the format and content of financial statements.

The *Aktiengesetz* prescribes many accounting provisions with the basic objective of preventing the overstatement of net assets and income. It includes valuation rules and principles in accord with the principles of proper accounting. In addition, it prescribes in great detail the structure and content of the financial statements. The balance sheet and the income statement must each follow one compulsory format.

Under the provisions of the *Aktiengesetz*, fixed assets are to be valued at cost less depreciation, and the lowest value principle is compulsory for fixed assets if an item's value has fallen continuously below cost (Macharzina, 1981, p. 140). Current assets are also to be valued on the lowest value principle. Therefore, German accounts usually show a conservative assessment of profit.

The law prescribes minimum accounting requirements with which companies must comply. Failure to comply with the specified requirements is prohibited, but

companies may provide more information than the law requires. Accountants have little room to practice judgment and must follow the legal requirements. One of the main features of German accounting is the lack of options in applying rules and principles.

The German Acts require that the financial statements must be prepared comprehensively and clearly within the required valuation principles and must give the clearest possible view of the financial position and the earnings of the company. This is basically to protect creditors.

West Germany and the EEC Directives

West Germany is a member state of the European Economic Community (EEC).* According to the Rome Treaty of 1957, the main objective of the EEC is to permit the free movement of persons, goods, and capital among the treaty countries by the year 1992. Barriers to industrial and commercial activities, such as those arising due to differences between the various accounting systems of countries in the EEC, must be removed.

The EEC has issued a series of directives to introduce many accounting principles and rules related to its harmonization program. These directives have been adopted by each member state into its own company law. The most important of these are the Fourth, the Seventh, and the Eighth directives. The Fourth directive deals with formats and valuation measurement rules of financial statements; the seventh concerns consolidation; and the Eighth specifies auditor qualification. Technically, the modification of German law was achieved by incorporating the three EEC directives into the HGB law of 1985 (Brooks and Mertin, 1986, p. 1 Ordelheide, 1989, p. 8).

Much controversy surrounded the adoption of the requirements of the Fourth Directive into the German statutory framework (Gray and Coenenberg, 1984, p. 56). Among the last countries to undertake implementation, West Germany introduced the requirements of the Fourth Directive into law in December 1985, effective in the beginning of 1986. Its delay was most probably due to the close relationship between accounting and its taxation laws; reforms in accounting cannot be implemented without considering their impact on taxation. Another reason for the delay was that the Germans were 'very happy with their accounting rules' as one accountant stated† and therefore were reluctant to change them.

Another reason for the delay may concern auditing. Problems arose from the adoption of the EEC Eighth Directive. Of the 30 000 companies subject to annual audits, according to the Eighth Directive (effective beginning in 1987), 17 000 were required to be audited for the first time. In addition, many consolidated financial statements also needed auditing (Wenig, 1982, p. 86; and Brooks and Mertin, 1986,

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*This twelve-country organization is also known as the Common Market. Its members as of 1991 are Belgium, The United Kingdom, Denmark, France, Greece, Holland, Ireland, Italy, Luxembourg, Portugal, Spain and West Germany.

†This statement and similar others were made to one of the authors of this article during his personal interviews with partners of accounting firms while visiting West Germany.

p. E6). The impact of this aspect of the Eighth Directive has had a major influence on auditing in West Germany.

The concept of *Ein den tatsachichen Verhaltnissen entsprechendes Bild der Vermögens – Finanz – und Ertragslage* (true and fair view) is new to the German law. It was introduced into West Germany through the requirements of the Fourth Directive. One may notice that translation of the four English words into German requires eleven words, which have the literal English meaning of 'a representation reflecting the actual situation of assets and liabilities (structure, classification), financial situation, and the profitability of a company' (Langer, 1989, p. 3). The complexity of its title may explain why the West Germans are reluctant to use the true and fair view. Furthermore, companies in West Germany have many options, especially regarding the creation and release of provisions, reserves, and hidden reserves. In this circumstance, the true and fair view concept is not applicable; thus, the application of this concept may be delayed.

The Accounting Profession

The accounting profession in West Germany is very small and not influential by U.S. standards. There are two professional bodies: the *Institut der Wirtschaftsprüfer* (Institute of Auditors) and the *Wirtschaftsprüferkammer* (Chamber of Auditors). Similar to the American Institute of CPAs, the *Institut der Wirtschaftsprüfer* was established by legislative action in 1931. As accounting rules and principles are prescribed by law, the profession's main task is, in fact, to interpret the law. Accountants, lawyers, academics, and other parties study the law and other legal regulations in order to solve problems that arise when the provisions of the law are applied to actual situations.

German accountants are considered to be among the most highly competent accountants in Europe. To qualify as a *Wirtschaftsprüfer* (WP), one must earn an advanced university degree (equivalent to the U.S. master's degree), have five years of business experience, and pass a written and an oral examination. Educational requirements are set by law, and the WP licence is granted by the Secretary of State. The examination includes seven separate parts taken on seven different days, each lasting from four to six hours. In addition, a candidate must successfully complete an oral exam before a board of examiners (Institut der Wirtschaftsprüfer, 1977, pp. 9–15). Candidates must pass the entire examination at one time, and they are allowed to retake the exam only twice (Dykxhoorn and Sinning, 1988, p. 2).

The profession has a reputation for rigorous education and training, and entry is very restricted. The small number of candidates who take the exam each year allows for extensive testing and assures that only highly qualified individuals enter the profession. Few people qualify before they are in their late thirties (Wenig, 1982, p. 83). Therefore, the profession is very small and increases in size slowly (see Table l). In 1986, there were approximately 4500 WPs (Hutcheson, 1984, p. 12), and by 1987, the number had increased to approximately 5000 (Lück, 1987). This is a very small figure in comparison with the number of accountants in the United States, which has more than 250 000 AICPA members. Furthermore, although the

Table 1. Growth of public accounting in West Germany

Year	No. of WPs	No. of accounting firms
1932	279	32
1940	1201	94
1951	1280	124
1962	1650	194
1970	2565	270
1980	3955	720
1984	4500	
1987	5000	

Source: A.G. Wenig "Public Accounting in West Germany: An Overview". *Journal of Accountancy*, April 1982, 84.

growth of partners of accounting firms increased by 45.2 percent over the period 1982–87 in Europe, it reached only 30.8 percent in West Germany (Wyman, 1989, p. 84–87). This increase is one of the lowest in Europe.

The size of the profession raises the question of how it is possible to provide adequate auditing services for one of the leading industrialized countries in Europe with a population of over 60 million people. This problem has been exacerbated by the requirements of the Eighth Directive. Providing the service is a problem even with the help of certified tax advisors and *vereidigte Buchprüfer*, CBEs (certified book examiners), who provide accounting services for small companies. The small number of WPs available to perform audits may have contributed to the failure to conduct rigorous audits, for in many instances large companies that were audited by members of the profession later filed for bankruptcy (Dykxhoorn and Sinning, 1988, p. 2).

An interesting feature of the accounting profession in West Germany is that some of the largest accounting firms are owned in part by non-WPs (e.g., banks or even the federal government.) This practice of ownership has been allowed since the establishment of the profession; however, it has been changed recently due to pressure from other EEC countries. According to the newly enforced Directive Law of 1985, only WPs, WP firms, lawyers, and certified tax consultants who work in the firm may own shares in newly formed WP firms (Institut der Wirtschaftsprüfer, 1986, pp. 7–8). It should be noted that this step, although a positive one, has no effect on the previously established firms.

Standardized Accounting

Standardized accounting has a long history in Germany. It has been a feature of German accounting since its introduction at the beginning of this century. After World War I, several industrial groups set up uniform cost systems. During the same period, uniformity in financial accounting for tax purposes was also encouraged. More importantly, uniform accounting was advanced with the development of the national chart of accounts.

Professor Eugen Schmalenbach of Cologne University, inspired by Professor Karl Bücher, invented a significant uniform accounting chart in the late 1920s. Schmalenbach's charts appealed to the government, which desired a high degree of

centralized control over the economy and therefore needed the type of data that his chart produced. In 1937, a decree made the adoption of uniform accounting compulsory in Germany. Approximately two hundred uniform charts of accounts and compulsory rules of book-keeping were introduced at a time and were made obligatory for the different industries and trades (Lafferty, 1975, p. 51). Uniformity was then considered as a complete national system enforced from above in Germany as well as in almost all of German-occupied countries including France, Poland, and Belgium.

With the fall of the Third Reich, however, compulsory uniformity was abandoned, although many sectorial charts continued to be used on a voluntary basis. By the mid-1960s, many problems had arisen in relation to the application of Schmalenbach's system. Thus, a retreat from Schmalenbach's model occurred in 1965 when the Corporation Law was introduced. Currently, West Germany has no compulsory uniform accounting plan as does France, for example. However, the main features of German accounting are still those of macro-economic accounting and uniform rules.

Vouching and Book-keeping Rules

West Germany has no specific vouching rules or record-keeping requirements. General rules of completeness, authoritativeness, and punctuality of record-keeping are, however, set by the Commercial Code (Institut der Wirtschaftsprüfer, 1977, p. 5). Income Tax Regulation No. 29 states that no specific system of book-keeping is prescribed but that the chosen system must ensure the inclusion of all business transactions and business assets. Transactions must be traceable through the books from their inception to their conclusion.

The taxpayer and a competent third party must be able to understand the accounting system without difficulty and in a reasonable time (Benny, 1975, p. 13). Unless kept in accordance with those criteria, accounting records can be rejected by tax authorities (Choi and Mueller, 1984, p. 83). Section 38 of the 1861 *Handelsgesetzbuch* (Commercial Code) requires each company to keep suitable books of accounts in a living language (not necessarily German) in bound form to record its business transactions and financial position according to proper accounting principles.

Chart of Accounts

The first comprehensive chart of accounts was apparently published by J. F. Schaer in 1911 (Nobes, 1983, p. 7). It mainly concerned internal and cost accounting and was used during the First World War. During the 1920s, however, Schmalenbach introduced the most important national uniform chart of accounts, which was also concerned with cost accounting.

Schmalenbach's book *Der Kontenrahmen (Framework of Accounts)*, published in 1927, proposed a national uniform accounting chart. This book has been translated into many languages, including Russian (Forrester, 1977, p. 63). Schmalenbach laid the basis for all subsequent developments in accounting in Germany and in the entire Continent. One author described Schmalenbach as 'the intellectual father of

organized thought on behalf of uniform accounting' (Mueller, 1966, p. 850) and 'many writers have considered his chart to be the most important contribution he made to the development of German as well as European accounting practices' (Abel, 1971, p. 36; Singer, 1943, p. 13).

Uniform charts were enforced until 1945, at which time the compulsory adoption of uniform charts, and uniformity in general, were abandoned. By 1949, a uniform chart of accounts, *Gemeinschaftskontenrahmen*, was developed and was used by different companies. By the mid-1950s more than 100 uniform charts were in use on a voluntary basis in Germany (Most, 1961, p. 166).

In 1971, a new chart called the *Industrie Kontenrahmen* (IKR) was published by the *Bundesverband der Deutschen Industrie* (BDI) (Federation of German Industry), but it was not compulsory. Unlike the previous ones, this chart is similar to the French chart, which is based on legal accounts and mainly concerns financial accounting. The IKR was developed to meet the requirements of the 1965 Corporation law. It seems that it will take some time for IKR to gain acceptance. Companies such as BASF still use their old charts. At present many sectorial charts of accounts are in use in West Germany on a voluntary basis.

Valuation of Assets

In general, conservatism is the basic rule for valuing fixed assets. Historical cost has been followed for a long time in West Germany. The strict and uniform application of detailed historic cost rules has been designed to lead to a conservative and reliable figure for distributable profit in order to protect creditors. The same figure is used for accounting profit and taxable profit.

Conservatism is practiced wherever it in possible and has an influence on provisions and reserves. In fact, hidden reserves are encouraged and allowed by law. The use of the accelerated method for depreciation in financial statements is an example of an overprovision. The provision for depreciation, bad debts, and any other risks are always intended to protect creditors. Disclosure of hidden reserves that result from the application of certain valuation methods must also be shown.

The valuation of assets is basically regulated by tax laws, to some extent by the Corporation Acts and the principles of orderly book-keeping as defined by the Commercial Code. Fixed assets are to be valued at the acquisition cost or the manufacturing cost less the accumulated depreciation. Inventories are usually valued at the weighted average or the FIFO (First in first out) method because these methods are unconditionally permitted for tax purposes. In any case, conservative rules must be applied, and the maximum balance sheet value of inventories is the lower of either the cost or the market value.

Intangible assets may be capitalized only if acquired from third parties. As far as goodwill is concerned, companies now have the option to capitalize purchased goodwill. Any capitalized amount must be written down by at least one quarter each year or is subject to systematic amortization. For the first time in 1986, the tax law allows a write-off over a normal life of 15 years (Brooks and Mertin, 1986, p. E4).

In addition, and in accordance with the Seventh Directive, the disclosure of goodwill resulting from consolidation is reflected. for the first time on the balance sheet as part of consolidated assets. Furthermore, an immediate write-off of goodwill as an extraordinary item is now permitted in West Germany (Wygal, 1989 p. 42).

All liabilities, including unrealized losses, must be provided for fully, but unrealized profits may not be recognized (Companies Act, 1965, Section 153). Depreciations, disposal, additions, and all other adjustments are to be stated separately in the annual accounts. However, it is common to find that many companies report the net amount of the fixed assets only at the beginning and the end of a period.

Additional depreciation may be charged to reduce the assets to replacement cost or as may be required for tax purposes. It is required that those fixed assets whose utilization is limited by time must be written down by methodical depreciation in accordance with the proper accounting principles over the lives of the assets. The overstatement of net assets and income should be prevented. According to the realization principle, upward corrections in excess of historical cost are not permitted until realized, but downward corrections are acceptable. Details on the employed valuation rules are required to be disclosed.

Replacement cost is of no great importance in Germany. This may be because of the relatively low rate of inflation. In respect to Article 33 of the EEC Fourth Directive (which allows the use of inflation accounting), Germany will not apply or permit replacement accounting or any similar method (Niehus, 1979, p. 454). This may be due to the strict adherence to the historical cost principle, and it appears that this will be continued in the future.

Depreciation is influenced to a great extent by the tax regulations. The official tax authorities publish *AFA Tabellen Absetzung für Abnützung* (tables for depreciation – deduction for wear and tear) from which depreciation is calculated. These tables, more than ninety in number, given the estimated life of every item in every industry (Price Waterhouse, 1972, p. 18). Differences between the actual depreciation and that permitted for tax purposes are usually not very significant. This is due to the fact that the tax authorities do go into considerable detail in an attempt to accommodate all types of fixed assets in their regulations.

Fixed assets other than buildings require compulsory depreciation using the straight-line method. Generally speaking, the basic straight-line rates of depreciation are as follows :

Buildings	2%–4%
Machinery and furniture	10%
Office equipment	20%
Computers	20%–25%
Vehicles	25%–30%, depending on use

Under the declining, balance method, the rate of depreciation may not exceed twice the rate of the straight-line method or 20 percent if the assets were acquired before September 1, 1977. After that date, it may not exceed either $2^1/2$ times the straight-line rate or 25 percent. The accelerated depreciation method is used for special cases as permitted by the tax authorities (e.g., for investment in listed regions

near the East German frontier and in West Berlin with a rate of 40–50 percent in the former and up to 75 percent in West Berlin) (Deloitte Haskins and Sells, 1980, p. 70).

Previously, the German law did not require consistency in applying valuation rules. However, this has been changed. In compliance with the EEC Fourth Directive, any material results now must be reported in the notes (Ordelheide, 1989, p. 6).

Format and Content of Financial Statements

German financial accounting is almost totally tax based, inflexible, and highly conservative. There are strict legal requirements as to the format and content of the annual accounts and reports. Such rigidly prescribed models for the annual accounts, though often criticized, provide an easy basis for intercompany, and even interyear, comparisons. The two main forms of annual accounts representation in Germany are the balance sheet and the statement of income. Notes to the accounts are rarely given prior to EEC directives.

The legal format of the annual accounts is set forth in great detail in the Companies Acts. All companies (except banking, insurance, and transportation companies) are required to follow these formats. The legal format is considered as a minimum, and more detailed headings are permissible. In general, the financial statements, especially the income statement, of German companies are presented in greater detail than those of U.S. or U.K. companies, for example.

In the balance sheet, assets and liabilities appear in reverse order as to their liquidity, exactly opposite to the U.S. format. Fixed assets are divided into two main categories, tangible and investments (including long-term loans). Current asset information must show the liquid state of debtors and accounts receivable. According to the new rules, the balance sheet classification has become clearer and more understandable.

Inventories must be stated separately followed by securities receivables, and cash. Within the liabilities, those not due for at least four years must be distinguished from other liabilities. The main liability items (capital stock, reserves, provisions, and other liabilities – legal, voluntary, and asset valuation reserves) must be separately identified.

Any change in the methods of valuation and depreciation, including depreciation charged in excess of *ausserplanmässig* (planned depreciation), must be disclosed, together with the exact date of effect, if the total changes in the profit represent 10 percent of the total profit or 0.5 percent of the share capital. This is basically to give as clear a view as possible of the resources and profit of the company.

The income statement is also prepared according to the legal format. The main items of the income statement are sales revenue and related costs, investment income, wages and salaries, depreciation charges, adjustments, interest and taxes, and transfers to reserves. Any change in the allocation of income and expenses from the previous year must be disclosed. Any extraordinary or prior year items must be stated separately under miscellaneous incomes or miscellaneous expenses. Discontinued operations and extraordinary items are shown before tax and that segment disposal is included

within extraordinary items (Wygal, 1989, p. 41). This differs from U.S. practice in which discontinued operations and extraordinary items are required to be shown net of tax in a separate section after the income tax.

Notes to the accounts are rarely given, but the published accounts usually contain a great deal of information and explanations, which in the United States, for example, would be shown normally under notes to the accounts. Much data, such as valuation rules and depreciation, are also disclosed in the management report. Comprehensive disclosure in the notes has become increasingly important in recent years.

The Companies Acts also require that under certain circumstances (e.g., when a company owns more than 50 percent of another domestic company's equity share capital), a consolidated balance sheet and income statement must be published. Consolidated financial statements have been required since December 31, 1989. Despite the pressure for greater disclosure, an evaluation of 100 West German financial statements indicated that not even a single company has yet complied with all of the disclosure requirements (Langer, 1989, p. 5).

Germany has no mandatory financial year end. However, a survey of published accounts and responses to personal interviews indicated that between 70 to 80 percent of German companies use the calendar year as the financial year. Companies have a statutory requirement to file for public inspection their annual accounts, auditor's attestation, and the report of the board of management and supervisory board with the local Commercial Register after the shareholders' meeting. These items are also to be published in *Bundesgesetzblatt I (Federal Gazette)* (Peat Marwick, 1983, p. 104).

According to the new publication requirements of the EEC directives, some 370 000 limited liability companies were required either to publish their 1987 financial statements in the *Federal Gazette* or to file with the Commercial Register no later than September 30, 1988. Nevertheless, only 26 000 companies, or 7 percent had done so by the end of 1988 (Langer, 1989, p. 13). The law does not provide any fine for non-compliance as it does for preparation of financial statements. However, the law specifies that the course may intervene at the request of shareholders or creditors.

Conclusion

Germany has a strict prescription of accounting rules. Company and taxation laws are rigid and set out in great detail rules for valuation and measurement, as well as the format and content of the financial reports. Historical cost and conservatism are highly emphasized and used, and financial statements are standardized. There is a heavy use of 'reserves' in German accounting, and the undervaluation of assets has led many companies to use 'hidden reserves'.

German accountants are not required to make value judgments for year-end purposes. They are not required to evaluate the economic viability of a company, or to make 'true and fair view' -type evaluations of these results. They are required, however, to ensure that the accounting records, the annual financial statements, and the director's report are in compliance with the legal requirements, tax laws, and the Company Law.

In Germany, strict uniformity imposed on accounting rules from the top during the late 1930s and the beginning of the 1940s has gradually been abandoned since World War II. This is obviously due to the change in the accounting environment from total government control of the economy to a free-market system and on to the more recent challenges of harmonization within the European Community. Accounting regulations are responding to the changes, although the response seems to be a slow process in West Germany. The introduction of the EEC directives may eventually help to reduce the differences in the accounting practices among the EEC countries. Nevertheless, West Germany still provides a good example of uniformity in accounting determined by statute law with a very close connection between financial accounting rules and corporation tax laws.

The recent fall of the Berlin Wall and efforts to unify Germany have created a new challenge for accounting in West Germany. As a product of its environment accounting must now react to meet the new needs presented by the reunification of Germany.

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Cultural Determinism and the Perception of Accounting Concepts

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Key words: Accounting concepts; Culture; Concept perception; Cultural relativism; Multidimensional scaling technique

Abstract: *Perceptions of a set of accounting concepts were subjected to analysis through two separate multidimensional scaling techniques to evaluate the intercultural perceptual differences of experimental groups, made up of Canadian, American and British members of an international accounting firm. The cultural relativism thesis provided the research hypothesis on the relationship between cultural membership and concept perception. These findings support the contention that accountants from different cultures differ in their perceptions of accounting concepts.*

Introduction

Culture has been considered an important environmental factor influencing the accounting system of the country (Mueller 1967; Nobes 1983, 1984; Hofstede 1987; Schreuder 1987). It was also argued that (a) accounting is in fact determined by culture (Violet 1983), and (b) the lack of consensus across different countries as to what represents proper accounting methods is because their purpose is cultural, not technical (Hofstede 1985). These arguments represent an acceptance of a cultural determinism in accounting whereby the culture of a given country determines the choice of its accounting techniques and the perception of its various accounting phenomena. This study investigates the hypothesis that accountants from different cultural groups will have different perceptions of accounting phenomena. Specifically, using a concept perception experiment, we found differences in perceptions of accounting concepts among managers and partners from the same Big Six CPA firm.

While several previous empirical and conceptual studies have examined the impact of national culture on accounting,[1] (Soeters and Schreuder 1988; Chevalier 1977;

[1]Other studies have investigated the impact of language, a component of culture, on accounting (Belkaoui 1978, 1980; Monti-Belkaoui and Belkaoui 1983; Flamholtz and Cook 1978).

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Acheson 1972; Jaggi 1975; Alhashim 1973; Mair and Frank 1980; Beazley 1968; McComb 1979; Singh 1967; Bromwich and Hopwood 1983; Choi and Mueller 1984; Belkaoui 1983, 1985), we introduce a cognitive perspective to explain the different perceptions of accounting concepts by participants from different cultural groups.

Theoretical Justification and Hypotheses

The concept of culture is not monolithic (Perera and Mathews 1987). Each of the concepts of "culture" from anthropology created different metaphors and ends in organizational research (Smircich 1983, p. 342). Malinowski's functionalism, with its view of culture as an instrument serving human biological and psychological needs, motivated cross-cultural or comparative management research (Malinowski 1944). Radcliffe-Brown's structuralism, with its view of culture as an adaptive regulatory mechanism that unites individuals in social structures, motivated research on corporate culture (Radcliffe-Brown 1968). Goodenough's ethnoscience, with its view of culture as a system of shared cognitions where the human mind generates culture by means of finite number of rules, motivated research on organizational cognition (Goodenough 1971, Frake 1968; Bock 1980). Geertz's symbolic anthropology, with its view of culture as a system of shared symbols and meanings where symbolic action needs to be interpreted, read or deciphered in order to be understood, motivated research on organizational symbolism (Geertz 1973). Finally, Levi-Strauss's structuralism, with its view of culture as a projection of mind's universal unconscious infrastructure, motivated research on unconscious processes and organization (Levi-Strauss 1983).

The interest in this paper is concept perception; therefore, a cognitive functioning view of culture is adopted to explicate cultural determinism in accounting. Culture is viewed as a system of shared cognitions or a system of knowledge and beliefs: "a unique system for perceiving and organizing materials, phenomena, things, events, behaviors and emotions" (Goodenough, quoted in Rossi and O'Higgins 1980, p. 63). It is generated in the human mind "by means of a finite number of rules or means of unconscious logic" (Rossi and O'Higgins 1980, pp. 63-64).

Using the cognitive emphasis, national cultures act as networks of subjective meanings or shared frames of reference that members of each culture share to varying degrees and which, to an external observer, appear to function in a rule-like, or grammar-like manner. Relating this to accounting and the cultural determinism thesis in accounting, we assume that different cultural groups in accounting create different cognitions or systems of knowledge for intracultural communications and/or intercultural communications. These, in turn, lead to a different understanding of accounting relationships. This led to the following research question: "Are the perceptions of accounting concepts, as measured by the individual weights assigned by the participants to the dimensions of a common perceptual space, a function of the cultural group membership?"

Multidimensional scaling techniques are used to evaluate the differences in accounting concept perceptions by participants from different cultural groups within

the accounting profession. The presumed differences may be a function of certain psychological, perceptual, and background variables. The variables examined are: (1) the subject's age, (2) his/her academic degree (3) his/her familiarity with financial statements, (4) the number of years of experience with the CPA firm, and (5) the number of years in the present position.

Method

Sample

The choice of subjects in our field experiment was motivated by the need to isolate the impact of national culture on the perception of accounting concepts from the potential impact of organizational culture and linguistic relativism. To control for the impact of organizational culture, respondents were recruited from three offices of the same international "Big Six" accounting firm, with a strong US orientation in organizational philosophies and policies (Soeters and Schreuder 1988). To control for the impact of linguistic relativism, the three offices were chosen in three Anglophone cities, namely Chicago, London, and Toronto. Therefore, English speaking partners or managers from the local offices of a Big Six international firm located in three different national cultures, US, British and Canadian, were asked to participate in our study and to indicate their perceptions of accounting concepts. The main difference in the subjects that may influence their perception of accounting concepts was the difference in their national culture.

A questionnaire was given to an official at the headquarters of the Big Six firm, who agreed to coordinate the distribution of the questionnaire in the three cities and to return them to the researchers. The official was instructed to include as respondents only the employees of the firm in the three cities who:

a) Were active in the accounting and auditing practice (thus excluding tax and consulting practice as well as administrative and other supporting staff)
b) Have reached the manager or partner level
c) Were born in the national culture of the country where the local office is located

These criteria produced a population of 87 respondents composed of 47 US, 21 British and 19 Canadian partners or managers.

Research Instrument

Subjects in the three cultural groups were given the same questionnaire written in English. The questionnaire required subjects to assign similarity judgments to paired sets of 12 concepts. In multidimensional scaling techniques, such similarity judgments are interpreted as "psychological distances" representing a "mental map" through which respondents view pairs of concepts that are "near" each other as similar and pairs of concepts that are "far apart" as dissimilar. If numerical measures are provided for the similarity judgments, multidimensional scaling techniques may be used to

construct a "physical" multidimensional map whose interpoint distances closely relate to the input data.

One of the multidimensional scaling techniques used in the study is the TORSCA non-metric scaling routine (Young 1968). Given $\frac{n(n-1)}{2}$ similarity/dissimilarity measures, the TORSCA program first yields a set of orthogonal coordinates for the final configuration and then estimates the dimensionality of the data. The other algorithm used in this study is the INDSCAL model (Caroll and Chang 1970). In contrast to the TORSCA solution, the stimulus configuration obtained from the INDSCAL algorithm is uniquely oriented. The INDSCAL model assumes that all individuals share a common perceptual space but assigns differential weights or salience to the different dimensions of the groups stimulus space. The individual saliences provide an operational measure for an evaluation of the possible inter- and intracultural group perceptual differences.

Both these multidimensional scaling techniques, the TORSCA an INDSCAL models, were applied to individual similarity judgments to estimate the dimensions of the common perceptual space and each respondent's salience. Regression was then used to measure the relation between salience and selected background variables which included the subject's age, the number of years employed in the firm and the number of years employed in the present position.

Professional Concepts and Experimental Decisions

The 12 concepts used in the study were chosen to reflect two categories of accounting concepts of relevance to accounting theory construction. The terms "going concern," "entity," "stable monetary unit," and "periodicity," represent underlying assumptions of accounting theory, while the terms, "cost principle," "revenue principle," "matching principle," "objectivity principle," "consistency principle," "full disclosure principle," "materiality principle" and "conservatism principle," represent generally accepted accounting principles within the profession (Belkaoui 1985).

Each of the participants was asked to do the following: (1) provide information on certain background variables, (2) for each of the financial statements assign a familiarity rating ranging from "not familiar" to "extremely familiar"; (3) for each of the pairs of twelve concepts used as stimuli, assign an integer rating on a seven-point scale ranging from "very dissimilar" to "very similar"; and (4) list the criteria used for assigning the similarities.

Procedure

The input to the TORSCA is a single rank-ordered similarity matrix computed by averaging the cell ranks obtained across all participants. The measure of departure from perfect fit, the "stress of the configuration", is used. As suggested by Kruskal (1964a,b), the departure from perfect fit (stress = 0) can be expressed as follows: .025 excellent; .05 good; .10 fair.

The input to the INDSCAL is the 87×12×12 matrix of similarity judgments for all participants. The measure of fit used is the squared correlation in distances (RSQ).

The RSQ values are the proportion of variance of the scaled data (disparities) in the partition (row, matrix, or entire data) which is accounted for by their corresponding distances.

Both TORSCA and INDSCAL will yield a set of dimensions of a common configuration that need to be identified. One way to identify the dimensions is the "maximum congruence" method of Miller, Shepard, and Chang (1964). The method correlates the coordinates of the solution with ratings obtained from the respondents on a set of candidate attributes. This method was not used in this study as the provision of a set of candidate attributes may potentially influence the responses of the subjects in their similarity rating task toward one single way of thinking. The method used in this study was to ask the participants to state in order of importance the criteria used in mating their similarity judgments. The rationale is that in assigning similarity ratings among concepts, a process of concept perception is generally used, consisting of either the recognition of shared or linked characteristics in the accounting concepts (stimulus generalization) or the recognition of shared differences (stimulus discrimination). In either case, the process of concept formation results in the grouping of experiences into conceptual classes on the basis of similarities in their characteristics (McDavid and Harari 1974, pp. 78–79). Hunt and Hovland (1960) classified the concepts as being conjunctive, relational or disjunctive. Conjunctive concepts are perceived as those sharing common perceptual characteristics. Relational concepts are those linked by some fixed relationships. Finally, disjunctive concepts are those concepts which differ on the basis of one or more characteristics.

Results

Preliminary Findings

The use of TORSCA resulted in the average stress indices of .356, .092 and .868 for two, three and four dimensions, respectively. Based on these results, a "goodness of fit" is provided by three dimensions (stress $\leq .10$). Kruskal considered a stress index under .10 to be fair. In addition Klahr (1969), measuring stress indices from random data, concluded that for 12 stimuli there was only a 5 per cent chance that a solution is random, if the stress index is not greater than 0.118. The use of INDSCAL produced an RSQ of 0.965 for three dimensions. On the basis of these findings on stress and RSQ measures, the three dimensional solution will be used in this study. Fig. 1 shows the graphical portrayal of the three dimensional solution.

Identification of Perceptual Dimensions

The participants had indicated the criteria they had used in making their similarity judgments. An examination of the participants answers revealed a consensus toward assigning similarity judgments on the basis of the existence or absence of common perceptual qualities between each pair of accounting concepts. An examination of the answers showed evidence of a process of concept formation used by the

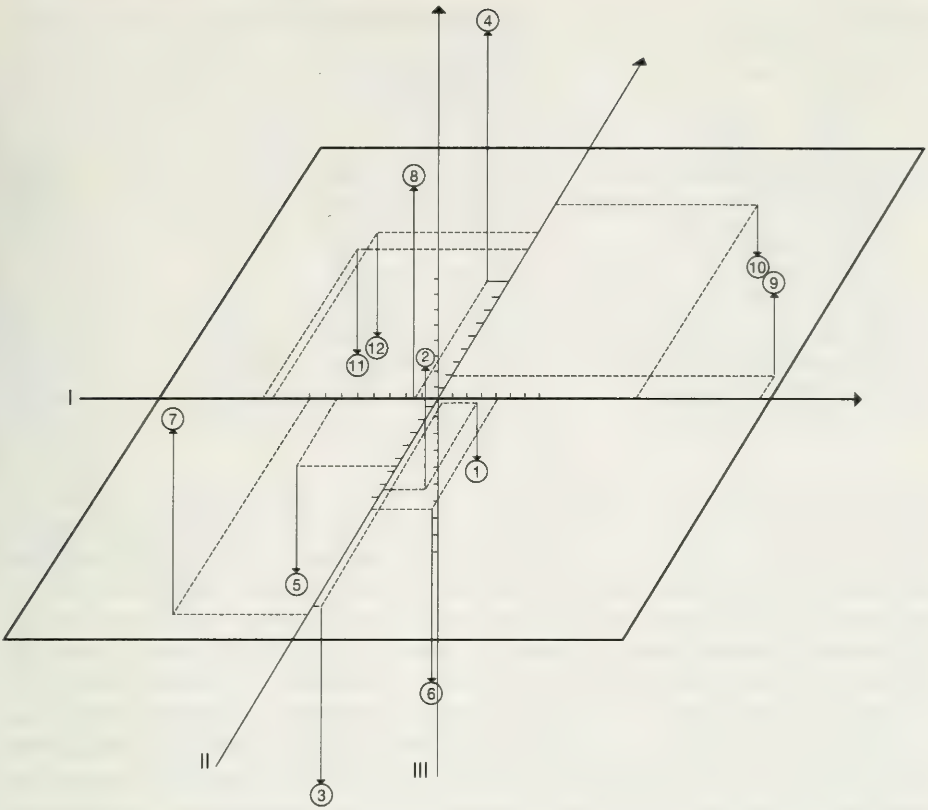

Fig. 1. Stimulus configuration. I. Relational dimension; II. Conjunctive dimension; III. Disjunctive dimension; 1. Entity assumption; 2. Going concern assumption; 3. Stable monetary unit assumption; 4. Period assumption; 5. Cost principle; 6. Revenue principle; 7. Matching principle; 8. Objectivity principle; 9. Consistency principle; 10. Full disclosure principle; 11. Materiality principle; 12. Conservatism principle.

participants. It follows that the three way concept perception classification is used to identify the three dimensions obtained in the INDSCAL model solution listed in Table 1 and portrayed in Fig. 1.

An examination of the stimulus configuration in Fig. 1 shows, for example, stable monetary unit and objectivity principle and consistency and materiality on opposite sides of dimension III. Similarly, revenue and cost principles and entity and objectivity are on opposite and equal sides of dimension I. Finally materiality and conservatism and entity and going concern are the same equal side of dimension II. On the basis of these extra-statistical findings, dimension I may be labeled as the relational dimension, dimension II as the conjunctive dimension and dimension III as the disjunctive dimension.

Intergroup Perceptual Differences

The INDSCAL model provides weights or saliences that each participant assigned to each of the three dimensions. A one-way analysis of variance for the three cultural

Table 1. Accounting Concepts' Salience in Three Dimensional Space

Accounting Concepts	Salience		
	Dimension 1	Dimension 2	Dimension 3
1. The entity assumption	0.2413	–0.0190	0.3497
2. The going concern assumption	0.2353	–0.5982	0.8683
3. The stable monetary unit assumpton	0.0022	–1.4585	–1.3549
4. The period assumption	–0.1446	0.9082	1.8595
5. The cost principle	–0.7469	–0.5209	–0.7631
6. The revenue principle	0.3756	–0.7796	–1.2843
7. The matching principle	–0.9497	–1.6190	1.3517
8. The objectivity principle	–0.2063	–0.0455	0.1575
9. The consistency principle	2.2555	0.2260	0.6949
10. The full disclosure principle	1.4267	1.4771	–0.3862
11. The materiality principle	–1.2672	1.1718	–0.7412
12. The conservation principle	–1.2220	1.2576	0.7518

groups of participants is used to determine if they have different saliences on each of the three dimensions. The results of the analysis of variance are portrayed in Table 2. The hypotheses of no differences in the intercultural group perceptual differences is rejected for both the conjunctive and relational dimensions, but not for the disjunctive dimension (at a level of confidence $\alpha = .10$) . Basically the different cultural groups in accounting created different cognitions or systems of knowledge for the perception of accounting concepts that share common perceptual characteristics (conjunctive concepts), or that are linked by some fixed relationship (relational concepts). The cognitive structure was not different among the three cultural groups for the accounting concepts that differ on the basis of one or more characteristics (disjunctive concepts). Therefore, a partial verification of the cultural determinism hypothesis is provided by the results in the sense that cultural affiliations lead to different cognitions or systems of knowledge, which, in turn, may lead to different approaches to the understanding of accounting relationships.

Intragroup Perceptual Differences

To determine whether the observed difference in cognitions or systems of knowledge held, after allowing for the subject's background, the subjects' salience for each of the three dimensions were regressed against the following variables: (1) the subject's age, (2) the number of years in the accounting firm, (3) the number of years in his/

Table 2. Results of the analysis of variances on three dimensions' salience

Source of variation	Dimensions											
	Cognitive				Relational				Disjunctive			
	df	Sum of squares	Mean squares	F	df	Sum of squares	Mean squares	F	df	Sum of squares	Mean squares	F
Model	2	0.0047	0.0023	2.77**	2	0.0054	0.00270	2.61**	2	0.00011	0.00005	0.15
Error	84	0.0724	0.0008		84	0.0870	0.00103		84	0.03301	0.00039	
Total	86	0.0772			86	0.0924			86	0.03313		

** Significant at a $\alpha = 0.10$.

Table 3. Regression results on the dimension's salience

Source of variations	Dimensions											
	Cognitive				Relational				Disjunctive			
	df	Sum of squares	Mean squares	F	df	Sum of squares	Mean squares	F	df	Sum of squares	Mean squares	F
Model	4	0.0029	0.00073	0.78	4	0.00566	0.0014	1.28	4	0.0024	0.00061	0.59
Error	84	0.0739	0.00094		78	0.08645	0.0011		78	0.0302	0.00038	
Total	82	0.0769			82	0.09212			82			

her present position, and (4) his/her familiarity with financial statements. Table 3 reports the results of the regressions analysis. The four independent variables have no effect on the subjects' cognitions as represented by three-dimensional space. Therefore, the accounting concept perception and the resulting salience could be considered as independent of these variables.

Discussion

The results suggest that intercultural differences exist in the perception of accounting concepts on two of the three dimensions of a common perceptual space. The results imply that the meanings of accounting concepts do vary in the manner with which they can be recognized, grasped, or understood by users from different cultural groups. These intercultural differences agree with the cultural determinism thesis that various cultural affiliations in accounting create different cognitions or systems of knowledge, which in turn, lead to a different understanding of accounting constructs.

This study has isolated the effects of culture on the perception of accounting concepts by controlling for (a) organizational culture (the subjects were all from the same Big Six accounting firm), (b) occupational culture (the subjects were all professional accountants), (c) the managerial culture (the subjects were all partners or managers), and (d) linguistic relativism (the subjects were all anglophones). The results were indicative of communications problems that may arise in the perception of accounting concepts as a result of differences in the cognition or systems of knowledge of each particular culture.

The findings have general implications for the study and practice of accounting internationally. The general practice in international accounting has been for the observer to start with a set of assumed universal theoretical premises before attempting an inquiry across cultures. In doing so, an "etic" approach is adopted, taking the perspective of the observer as an important ingredient for the generation of scientifically predictive theories about the causes of sociocultural differences and similarities. Given the cultural relativism results found in this study, an "emic" approach is preferable as: (a) it studies behavior from within the system, (b) examines one culture at a time, (c) uses a structure discovered by the analyst (rather than created by the analyst), and (d) uses criteria that are relative to the internal characteristics (rather than criteria that are assumed absolute or universal). The emic approach to cultural determinism to accounting, as advocated by this study's

results, holds that culture determines and/or influences accounting techniques. An adoption of the emic approach to cultural relativism and cross-cultural research in accounting will allow the discipline to (a) establish the boundary conditions for accounting models and theories, (b) evaluate the impact of cultural and ecological factors in accounting contexts, and (c) identify the few cultunits that represent deviant cases.

Conclusion

A selected set of accounting concepts was subjected to analysis using multidimensional scaling techniques to evaluate the intercultural difference between three groups of partners and managers from the same Big Six accounting firms. Cultural relativism was used to justify the possible lack of consensus on the meaning of accounting concepts as a result of different cognitions or systems of knowledge in the three cultures. The INDSCAL model applied to the matrix of similarity judgments enabled the identification of three dimensions and subjects' salience. The dimensions were labeled as conjunctive, relational, or disjunctive, by analogy to the process of concept formation. An analysis of variance applied to the individual salience verified the cultural determinism thesis for two of three dimensions of a common cognitive space. These results indicate basic communication problems in the perceptions of accounting concepts as a result of differences in the cognition or system of knowledge of each particular culture. It appears then that the subjects from different cultures differ in their perception of accounting concepts independently of the differences in age, number of years in the accounting firm, number of years in the present position, and the degree of familiarity with financial statements. These differences are basic differences arising from cultural differences in the perception of accounting concepts. These differences may be explained by differences in value systems placing different emphasis on the meaning of each of the accounting concepts examined in this study. For example, differences in the perception of conservatism are consistent with the cultural differences on uncertainty avoidance. As stated by Gray: "A preference for more conservative measures of profits is consistent with strong uncertainty avoidance following from a concern with security and a perceived need to adopt a cautious approach to cope with uncertainty of future events" (Gray 1988, p.10). Therefore, the results observed in this study show that the difference in the perception of accounting concepts are reconcilable with differences in societal values that have a definite impact on accounting values. Given these communication problems, one may envision inconsistencies in audit behavior, financial analysis, accounting method choice, etc. Further research is needed on these subjects, especially in terms of allowing for the investigation of the combined effects of culture as cognition on the one hand, and organizational culture, occupational culture, managerial culture, and linguistic relativism on the other. In short, these preliminary results point to the need for more conceptual and empirical research on the nature and consequences of cultural determinism in accounting.

Appendix. Questionnaire

1. Name: ______________________________
2. Age: ______________________________
3. Area of Undergraduate Studies: ______________________________
4. Number of Accounting Courses Taken: ______________________________
5.

Based on your background and experience, indicate the degree of importance you would assign to each piece of the following information when comparing the financial performance of two firms.

Circle the number corresponding to your evaluation.

	NOT IMPORTANT						EXTREMELY IMPORTANT
Balance Sheet	1	2	3	4	5	6	7
Profit and Loss Statement	1	2	3	4	5	6	7
Funds Flow Statement	1	2	3	4	5	6	7

6. <u>Consider the Following Accounting Hypotheses</u>

Hypothesis	No. 1	Entity Assumption
	No. 2	Going Concern Assumption
	No. 3	Stable Monetary Unit Assumption
	No. 4	Period Assumption
	No. 5	Cost Principle
	No. 6	Revenue Priniple
	No. 7	Matching Principle
	No. 8	Objectivity Principle
	No. 9	Consistency Principle
	No. 10	Full Disclosure Principle
	No. 11	Materiality Principle
	No. 12	Conservatism Principle

Assuming you are familiar with these accounting hypotheses, indicate the degree of similarity of each pair of concepts. The criteria to be used are left to your discretion – be consistent in your evaluation.
Example: If you think that hypotheses 1 and 2 are very dissimilar accounting concepts, <u>circle</u> 1.

Hypothesis 1 & Hypothesis 2

Very Dissimilar	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	Very Similar

Hypothesis 1 & Hypothesis 3

Very Dissimilar	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	Very Similar

Hypothesis 1 & Hypothesis 4

Very Dissimilar	1	2	3	4	5	6	7	Very Similar

Hypothesis 10 & Hypothesis 11

Very Dissimilar	1	2	3	4	5	6	7	Very Similar

↓

Hypothesis 10 & Hypothesis 12

Very Dissimilar	1	2	3	4	5	6	7	Very Similar

Hypothesis 11 & Hypothesis 1

Very Dissimilar	1	2	3	4	5	6	7	Very Similar

↓

Hypothesis 11 & Hypothesis 12

Very Dissimilar	1	2	3	4	5	6	7	Very Similar

7. List the criteria used for assigning similarities in question no. 3.

   . ______________________________
   . ______________________________
   . ______________________________
   . ______________________________
   . ______________________________

8. Please provide the following background information.
   1. What year were you born? 19___.
   2. To the nearest year, how many years have you been employed in this firm? ___ years.
   3. To the nearest year, how many years have you been employed in the present position? ___ years.
   4. Describe the exact nature of the activities of your department or group. Be specific.

      ____
      ____
      ____

   5. The results of this research will be mailed to you if you indicate your name and address:

      ____
      ____
      ____

9. Thank you very much for your cooperation and support.

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Empirical Differences Between Japanese and American Budget and Performance Evaluation Systems

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Abstract: *An empirical comparison of budget and performance evaluation systems in large Japanese and American manufacturing companies found many similarities, but also some significant differences. Division managers participated more in the budget process in American companies. There were also dramatic differences in the ranking of budget goals. Return on Investment was most frequently listed as the most important division budget goal in American companies, but in Japanese companies Return on investment was ranked as the top budget goal less than 1% of the time. Other areas showing differences included the usage of budget variances and the relationship between performance and division manager rewards.*

Introduction

This paper reports the results of an empirical study of the budget and performance evaluation systems in large, industrial companies in Japan and the United States of America. A mail questionnaire survey was conducted using the Fortune 500 industrial companies in the United States, and the industrial firms listed on the Tokyo First Market Stock Exchange. The questionnaire collected data concerning organizational structure, the budget planning process, and the budget control process.

There has been much discussion in the business literature of the differences between Japanese and American businesses.[1,3,10] The accounting literature has also suggested that there are differences in the use of budgeting and performance evaluation techniques between Japan and the United States.[5,7] However, there has been little if any empirical study to document differences between various aspects of the budget

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Table 1. Composition of Japanese and American surveys and responses

Industry classification	Responses		Survey size		Response rate	
	Japan	USA	Japan	USA	Japan	USA
Mining	2	2	7	13	28.6%	15.4%
Foods	23	3	53	55	43.4	5.5
Textile	12	2	41	22	29.3	9.1
Paper/pulp	9	3	18	32	50.3	9.4
Chemical	52	10	119	65	43.7	15.4
Oil/coal products	7	5	9	43	77.8	11.6
Rubber	4	2	9	11	44.4	18.2
Glass/ceramics	8	2	31	16	25.8	12.5
Steel/non–steel metal	25	2	59	24	42.37	8.3
Metal products	8	3	21	19	38.1	15.8
Machinery	24	5	83	34	28.9	14.7
Electronics	41	8	103	71	39.8	11.3
Transportation equipment	21	6	48	39	43.8	15.4
Precision machinery	8	1	18	17	44.4	6.9
Other	12	2	27	39	44.4	5.1
No response		24				
Totals	256	80	646	500	39.6%	16%

planning and control systems actually used in Japanese and American companies. Studies in this area have been based on individual cases, e.g., JIT (Just-in-Time) at Toyota, relatively small samples,[4,8] or on attitudes toward budget control systems.[2] Other comparative studies have focused on corporate strategy.[6] This study used a relatively large sample to determine the current actual characteristics of the budget and performance evaluation systems of Japanese and American companies. Some of the specific areas investigated included type of budget, time to prepare the budget, use of budget committee, degree of division manager participation, ranking of budget goals, use of budget variances, and the relationship between budget performance and division managers' rewards. In general, it was found that many of the same budget planning and control practices are used in both Japanese and American companies. However, significant differences were found in the areas of manager participation in budget planning, the importance of some budget goals (notably sales volume and return on investment), the use of budget variances, and the effects of performance on manager rewards and promotion.

The Survey

The Japanese survey questionnaire was mailed to 646 industrial companies listed on the Tokyo First Market Stock Exchange. This questionnaire was written in Japanese. The questionnaires were addressed to the Company Controller or the Manager of the Controller Department ("Keiri Bucho" in Japanese). Both the Japanese and English versions of the questionnaire specified that it should be completed by the controller or the representative of the controller. Completed questionnaires were returned by 256 Japanese companies which was a response rate of 40 per cent for this part of the study.

Table 2. Type of organizational structure as a percentage of respondent companies

	Japan	USA
Functional organization	32%	11 %
Divisional organization:		
Product or industry division	49%	76%
Regional division	2%	0%
Functional division	4%	2%
Mixed type of product and region	4%	6%
Mixed type of product and functional	9%	3%
Mixed type of regional and functional	0%	1%
Total divisional organization	68%	89%
	100%	100%
Number of companies	256	80

The English version of the questionnaire was mailed to the Company Controller or Chief Financial Officer at the 500 largest American industrial companies listed by *Fortune*. Completed questionnaires were returned by 80 of the American companies in the sample. This was a response rate of 16 per cent. In addition, another 19 companies returned questionnaires which were not sufficiently complete to be included in the survey results. The lower response number and rate for American companies compared with Japanese companies indicates that the reported results for American companies may not be as representative of American budget planning and control practices as the Japanese results are for Japanese budget planning and control practices.

Table 1 shows for both Japanese and American companies the number of companies in the initial surveys, the number of responses, and the response rates by industry classification.

Organizational Structure

The first section of the questionnaire inquired as to the company's organizational structure. The majority of the Japanese and American companies specified that they had a divisional organization structure as shown in Table 2. For the Japanese respondent sample 68 per cent reported a divisional organization while 89 per cent of the American respondent sample reported having a divisional organization. The majority of the divisionalized companies from both countries based their divisions on a product or industry classification. To extent that a decentralized style of management follows or is facilitated by a divisional organization structure, both Japanese and American companies in the study have a significant opportunity for this style of management.[9] Several of the following questions explored the realization of this potential. The balance of this paper focuses on the companies with a divisional organizational structure.

Description of Budget System

For the divisional organization companies, virtually all respondents reported the use of a complete master budget. These results are shown in Table 3.

Table 3. Type of budget for divisionalized companies

	Japan	USA
Complete master budget	93.0%	91.4%
Expense budgets only	6.4%	8.6%
No budget	0.6%	0.0%
	100 %	100 %
Number of companies	173	71

In describing the extent to which the budget reflects the companies' overall goals and specific objectives approximately 70 per cent of the Japanese companies and 78 per cent of the American companies indicated that their budget reflected either overall company goals or divisional profit goals For the 30 per cent of the Japanese companies whose budgets reflected more detailed objectives a greater number indicated specifying divisional production and sales goals as opposed to specifying more detailed divisional objectives involving specific cost categories and activities. On the other hand the minority of American companies whose budgets went beyond reflecting overall company goals or divisional profit objectives were most likely to have budgets that reflected the most detailed objectives. This is shown in Table 4.

Table 4. Budget reflection of goals and objectives

	Japan	USA
Budget reflects the general overall company goals	26.9%	31.8%
Budget indicates each division's target profit and sales	43.3%	47.0%
Budget indicates the goals involving production and sales for each division	18.1%	4.5%
Budget indicates more detailed objectives such as advertising, maintenance, and employee training	11.7%	16.7%
	100%	100%
Number of companies	171	66

In Table 5 we see that the average length of time spent in preparing annual budgets was nearly 12 days longer for the American companies compared with the Japanese companies. The American companies also reported a greater average number of meetings of a formal budget committee. *t*-tests showed these differences were significant at the one per cent level. These differences may indicate a greater complexity in the budget planning process of the American companies, but they may also be a function of a larger corporate scale for the American companies. In

Table 5. Logistics of budget preparation

	Japan	USA
Average number of days preparing the budget*	57.73	69.72
Average number of meetings of formal budget committee*	2.28	4.76
Number of companies	168	66

**t*-test shows significant difference at .01 level.

Table 6. Division manager participation in budget committee discussions

1 ↑ Never	2	3	4 ↑ 50% of the time	5	6	7 ↑ Always

	Japan	USA
Mean response*	4.976	5.543
Standard deviation	1.952	1.567
Number of companies	170	70

**t*-test shows significant difference at .025 level.

any case these differences suggest that further study is warranted in the area of comparing the basic logistics of the budget planning process of Japanese and American companies.

Participation in Budget Planning

The next series of questions examined the role played by division managers in the budget planning process. A seven-point Likert scale was used to assess how frequently division managers were able to participate in the formal discussions of the budget committee. The scale ranged from "Never Participates" (1) to "Always Participates" (7) with the midpoint (4) described as "Participates approximately 50 per cent of the time." For both the Japanese and American companies the average degree of this participation was greater than 50 per cent of the time. The mean response for the American companies was 5.543, and the mean response for the Japanese companies was 4.976. Based on a *t*-test this was a statistically significant difference at the .025 level. These results are shown in Table 6. The amount of actual influence that division managers have on the budget committee was assessed on another seven-point Likert scale. This scale ranged from "None" (1) to "Moderate" (4) to "Very Strong" (7). The average response for both Japanese and American companies showed division managers to have more than "moderate" influence on the budget committee. The mean response for American companies was 5.71, and the mean response for Japanese companies was 4.521. Based on a *t*-test this difference was statistically significant at the .001 level. These results are shown in Table 7.

Table 7. Division manager influence on the budget committee

1 ↑ None	2	3	4 ↑ Moderate	5	6	7 ↑ Very strong

	Japan	USA
Mean response*	4.521	5.710
Standard deviation	2.105	1.238
Number of companies	169	69

**t*-test shows significant difference at .001 level.

Table 8 reports additional information of division management participation in the budget process of Japanese and American companies. These questions were all based on the same seven-point Likert scale that was used in Table 6. In each case

Table 8. Participation in the budget process

1	2	3	4	5	6	7
↑			↑			↑
Never			50% of the time			Always

	Mean response	
	Japan	USA
How often are the initial targets of top management not used in the budget planning?*	4.747	3.074
How often does top management require modifications to the division's initial budget proposals?*	5.088	4.412
How often are divisions required to coordinate their budget preparation?*	4.053	5.030
How often do operating managers within a division participate in preparing the division budget?*	5.634	6.667

**t*- test shows significant difference at .01 level.

the mean Japanese response and the mean American responses were compared using a *t*-test and the differences were statistically significant at the .01 level. The results shown in Table 8 show several statistically significant differences in the budget process of Japanese and American companies. In Japanese companies division managers were more likely not to use the targets of top management in the budget planning process, but in Japanese companies there was a greater likelihood that top management would step in to require a modification of the division's initial budget proposals. This appeared to reflect a bottom up approach in the budget process. A top down approach seemed to be more common in American companies where top management's budget targets are used in division budget planning, but after that top management then provided more autonomy to the divisions. In both Japanese and American companies participation was extended to operating managers within the

Table 9. Percentage of divisionalized companies ranking the first, second and third budget goals for division managers

	First		Second		Third	
	Japan	USA	Japan	USA	Japan	USA
Sales volume	55.6%	4.2%	24.5%	12.7%	6.2%	11%
Sales growth	3.5%	5.7%	2.9%	8.5%	13%	8.2%
Market share	0.6%	2.8%	1.8%	7.0%	11.1%	8.2%
Asset turnover rate	0.0%	1.4%	0.0%	2.8%	4.3 %	5.5%
Profit margin on sales	3.5%	1.4%	11.1%	9.9%	16.1%	19.2%
Return on investment	0.6%	29.6%	0.6%	16.9%	1.9%	21.9%
Residual income	7.0%	5.7%	9.4%	5.6%	4.9%	0.0%
Controllable profit	5.8%	22.5%	18.1%	19.7%	4.3%	9.6%
Net profit after allocated corporate overhead	19.9%	18.3%	19.9%	9.9%	4.9%	6.8%
Production cost	0.6%	2.8%	11.1%	2.8%	29.0%	6.8%
Other	2.9%	5.6%	0.6%	4.2%	4.3%	2.8%
Total	100%	100%	100%	100%	100%	100%
Number of companies	171	71	171	71	162	71

Table 10. Budget goals for division managers most commonly ranked first, second and third

% of time ranked first:	Japan		USA
Sales volume	55.6%	Return on investment	29.6%
Net profit after corporate overhead	19.9%	Controllable profit	22.5%
Residual income	7.0%	Net profit after corporate overhead	18.3%
% of time ranked second:			
Sales volume	24.5%	Controllable profit	19.7%
Net profit after corporate overhead	19.9%	Return on investment	16.9%
Controllable profit	18.1%	Sales volume	12.7%
% of time ranked third:			
Production cost	29.0%	Return on investment	21.9%
Profit margin on sales	16.1%	Margin on sales	19.2%
Sales growth	13.0%	Sales volume	11.0%

division and there was also emphasis on coordination between divisions. However, American companies did report using these practices more frequently.

Division Budget Goals

In the questionnaire the respondents were asked to rank the top three budget goals for a division manager. The results of these rankings are shown in Tables 9–11. Table 9 shows the percentages of divisionalized respondents for each country that ranked specific budget goals first, second, and third. Table 10 summarizes results from Table 9 showing the goals most frequently ranked first, second, or third for each country. Table 11 shows the percentage of time the most important goals were listed in the top three goals for each country.

The most dramatic difference between Japanese and American companies in division budget goals was found for sales volume and return on investment. For Japanese companies sales volume was ranked as the most important goal 56 per cent of the time, and was listed in the top three goals 86 per cent of the time. In contrast only four per cent of American companies listed sales volume as the most important goal for division managers, and only 28 per cent ranked sales volume in the top three goals. American companies most frequently ranked return on investment as the number one goal for division managers. This was reported by 30 per cent of the American companies. Return on investment was one of the top three goals for 68

Table 11. Percentage of time ranked in top three budget goals for division managers

	Japan	USA
Sales volume	86.3%	27.9%
Net profit after corporate overhead	44.7%	35.0%
Controllable profit	28.2%	51.8%
Profit margin on sales	30.7%	30.5%
Sales growth	19.4%	22.4%
Return on investment	3.1%	68.4%
Production cost	40.7%	12.4%

per cent of the American companies. Only three per cent of the Japanese companies included return on investment in their top three goals for division managers.

There were two profit-related goals commonly included in the top three rankings of both Japanese and American companies. These were net profit after allocation of corporate overhead and controllable profit. On a combined basis these goals were included in the top three by 73 per cent of Japanese companies and 87 per cent of the American companies. For the companies that selected these goals the Japanese companies were more likely to select net profit after allocation of corporate overhead and American companies were more likely to select controllable profit. Two other goals commonly included in the top three for division managers were profit margin and sales growth. There was little difference between Japanese and American companies in including these goals in the top three. In all there were seven different goals commonly listed in the top three budget goals for division managers. The two profit goals combined, profit margin, and sales growth were similarly ranked for both Japanese and American companies. However, a dramatic difference between Japanese and American companies was found in the relative importance given to sales volume and return on investment.

Division Budget Variances

The use of division budget variances was assessed by a series of questions related to a seven-point Likert scale. This scale ranged from "not used for this purpose" (1) to "used somewhat for this purpose" (4) to "used extensively for this purpose" (7). Statistically significant differences were found between Japanese and American companies for several potential uses of these variances. These results are shown in Table 12.

Japanese companies used division budget variances more extensively than American companies for timely recognition of problems, and to improve next period's budget.

Table 12. Use of division budget variances

1	2	3	4	5	6	7
↑ Not used for this purpose			↑ Used somewhat for this purpose			↑ Used extensively for this purpose

	Mean response	
	Japan	USA
Timely recognition of problems*	6.054	5.046
To evaluate management ability of division manager*	3.962	4.797
To evaluate forecasting ability of division management**	3.823	4.313
To improve next period's budget*	5.667	4.375
To control direct costs	5.494	5.125
To control overhead costs	5.184	4.984
To provide control information to division manager	5.820	5.875

* t-test shows significant difference at .01 level; ** t-test shows significant difference at .05 level.

Table 13. Influence of budget performance on division manager's bonus and salary

1	2	3	4	5	6	7
↑			↑			↑
No influence at all			Moderate influence			Very significant influence

	Mean response	
	Japan	USA
To what extent does a division's budget performance influence the bonus for the division manager?*	3.627	5.594
Number of Companies	158	69
To what extent does a division's budget performance influence the salary for the division manager?*	2.850	4.486
Number of companies	147	70

* *t*-test shows significant difference at .01 levels.

American companies were more likely than Japanese companies to use division budget variances to evaluate the management ability and forecasting ability of division managers. There were no significant differences in the use of division budget variances for cost control purposes, but both Japanese and American companies indicated that cost control was one of their most important uses of division variances. In fact, based on the mean Likert scores, American companies ranked cost control as the most important use for division budget variance and Japanese companies ranked cost control as the second most important use.

Performance and Division Manager Rewards

In the final section of this study we consider how performance was related to a division manager's bonus, salary and promotion. Table 13 shows the extent to which a division's budget performance influenced the division manager's bonus and salary. This influence was shown to be much greater in American companies than in Japanese companies. These differences were statistically significant at the one per cent level.

For both American and Japanese companies, division budget performance had a greater influence on a manager's bonus compared to its influence on the manager's salary. These results were based on seven-point Likert scale questions with a potential response range from "no influence at all" (1) to "moderate influence" (4) to "very significant influence" (7).

The influences of financial performance on a manager's bonus and salary were considered to be indications of short term performance evaluation. To assess the role of financial performance in longer-term evaluation the companies were asked to rate how important division profit and sales growth were in evaluating a division manager for promotion or new assignment. These questions were based on a seven-point Likert scale where the choices ranged from "not at all important" (1) to "moderately important" (4) to "very important" (7).

Table 14. Importance of division profit and sales growth for division manager promotion or new assignment

1	2	3	4	5	6	7
↑			↑			↑
Not used for this purpose			Used somewhat for this purpose			Used extensively for this purpose

	Mean response	
	Japan	USA
Importance of division profit performance for evaluating division manager for promotion or new assignment*	4.152	5.254
Number of companies	158	71
Importance of sales growth for evaluating division manager for promotion or new assignment**	4.434	4.479
Number of companies	159	71

**t*-test shows significant difference at .01 level; ***t*-test shows significant difference at .05 level.

In Table 14 the responses again indicate that financial performance measures were more important for evaluating division managers in American companies than in Japanese companies. These results are statistically significant, however, the differences are less for a longer-term decision such as a promotion, than for a short-term decision such as a bonus. This is both because Japanese companies showed a higher importance rating for financial performance relative to promotion evaluation decisions than they did for bonus and salary decisions, and because American companies reported a slightly lower importance for promotion decisions than they did for bonus and salary decisions. In summary, American companies placed more emphasis on financial performance measures for both short-term and long-term decisions than Japanese companies. Japanese companies, however, increased the emphasis on financial performance measures in the long run, whereas this was not the case for the American companies in this study.

Summary and Conclusions

In this paper we have reported the results of a mail questionnaire survey of the budget planning and control systems actually used in Japan and the United States. In particular, we focused on large, divisionalized, industrial companies. The response rate and number of responses were much larger for Japanese companies than for American companies. For this reason the Japanese results may be more generally representative of Japanese companies in general than the American results are for American companies in general. Nevertheless, there are apparently some significant differences in the budget planning and control systems of Japanese and American companies.

As reflected by budget preparation time and number of budget committee meetings, the budget preparation process of American companies is more complex than for

Japanese companies. Participation in budget preparation is common in both countries, but it is significantly more common for division managers and operating managers in American companies. Even though there is more budget participation in American companies the budget planning process is initially oriented to a top down approach compared to a bottom up approach for Japanese companies.

A major difference was found in the ranking of budget goals for division managers. Japanese companies ranked sales volume as the most important goal, followed by profits after allocation of corporate overhead. Very few Japanese companies even included return on investment in their top three budget goals for division managers. For American companies, return on investment was the top ranked budget goal followed by controllable profit.

In the area of budget control both Japanese and American companies reported that budget variances were important for cost control purposes. As to other uses for budget variances, Japanese companies were significantly more likely to focus on identification of problems and improving future budgets, while American companies were significantly more likely to focus on performance evaluation of division managers.

The final area where significant differences were found was in the relationship of financial performance measures to division managers' bonuses, salaries, and evaluation for promotion. Budget performance, profit, and sales growth were more influential for American companies particularly in the short term. It is likely that these differences in emphasis on financial performance measures would have different effects on division management behavior. It has been suggested that American managers focus more on short-term performance than Japanese managers. This study has provided some empirical evidence of how the budget planning and control system may contribute to this difference in manager behavior. Further empirical research should be encouraged in this area.

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Book Reviews

Structural Change in the World Economy *edited by Allan Webster and John H. Dunning, Routledge, New York, 1990, 245pp, $45.00.*

It is clear that the global economy is undergoing significant international integration and structural change. Unfortunately, these changes and their implications are not widely understood or appreciated. As an example, accountants must understand these changes as they pose significant challenges for them. Existing accounting, standards and practices must be modified and new standards and practices developed to reflect these changes in the global economy. Many of these changes have significant long-term consequences; developing procedures to assess current accounting effects of these changes pose complex questions for accounting practice, require a great deal of study, and often have no easy answers among the many economically logical alternatives.[1]

The Financial Accounting Standards Board (FASB) is valiantly trying to respond to these many changes by developing many new standards and has created the Emerging Issues Task Force (EITF) to issue rulings on accounting questions posed by these new developments, including questions about how to account for the wide range of new financial instruments that are continually being developed. Consequently, many accountants, especially those in smaller firms, have complained of the challenges posed by the increasing standards overload. Unfortunately, there does not seem to be any simple alternative. Thus, it is important that accountants know and understand the nature of the changes taking place in the world economy, changes that are one of the reasons for the recent standards overload in accounting.[2] In addition, accountants must understand the nature of recent global changes if they are to function effectively as partners in the firms they serve, especially since accounting choices have economic consequences and accounting information is generally considered relevant for making economic decisions.[3]

To better understand the contribution of this book on structural change in the world economy, the major changes in the world economy need to be reviewed briefly. The cold war between the United States and the Soviet Union finally seems to be over but Japan seems to have emerged as the victorious party. While the now exhausted protagonists invested a large proportion of their savings and other resources on maintaining a high level of military preparedness, the Japanese continued to save

at high rates and invest in new machines, education, and commercial research. Consequently, Japanese commerce and finance are now healthy, strong and positioned for further growth while the Soviet economy faces major problems and the future prosperity of U.S. economy is threatened by the large amounts of foreign and domestic debt capital used to maintain its current prosperity.

Major changes in the commercial and financial standings of nations do not seem to be a new phenomenon. Italian banks dominated global commerce four hundred years ago, the Dutch banks had their heyday approximately two hundred years ago, and the British dominated global finance and commerce for the century before World War I. US companies and banks then assumed the role of providing leadership and financing for global trade. This US hegemony of global finance was first challenged (briefly) by petroleum exporting Arab nations in the 1970s and is now under increasing assault by Japan.

The world economy is currently reacting to the economic and social impact of the commercialization of at least three major categories of new technology: bioengineering based on genetic information, microprocessor-based information processing, and electronic telecommunications. These new technologies, designed to supplement human intellectual and genetic abilities, are based on the creation, manipulation, and transmission of electronic and genetic information and are likely to transform the global economy even more fundamentally than the industrial revolution when human and animal power was supplemented by mechanical power. As an example, the average value density (the value to weight ratio) of goods and services consumed in a modern economy continues to increase together with increases in the proportion of goods and services that can he transported electronically. In addition, recent decades have witnessed significant advances in international communications and transportation which have facilitated the international transmission of technology and cultural values. These developments have resulted in a number of changes in the environment of business many of which are often misunderstood.

World trade has grown much faster over the last few decades than has world Gross National Product (GNP). Global exports and imports were approximately one-fifth of global GNP in 1962. This figure had increased to about one-fourth by 1972 and to more than one-third by the 1980s. This remarkable increase in international trade is reflected in the increased openness of almost all national economies to international influences. Production and marketing are becoming increasingly global not only for mature industrial products, such as textiles, steel, farm equipment, and autos, but also for such items as consumer electronics, computers, and semiconductors. Consequently, even small and medium sized companies that do not directly engage in any cross-border transactions, nevertheless, are exposed to, and must deal with, changes in the global business environment. Another result of this increasing globalization and openness of markets and of the recent advances in telecommunications, is that the international transfer of technology seems to be accelerating. Consequently, firms must react to ever shorter product life cycles and multiple sources of innovation domestically and internationally.

Interestingly, the new sources of competition in many industries often originate in the Newly Industrializing Countries (NICs). As an example, not only are the mature industries in the developed countries being challenged by NIC based firms, developed

country firms at the top end of the technology scale in semiconductors and computers are also being challenged by firms from such NICS as Korea and Taiwan. In addition, there is also evidence of technological leapfrogging, where some NICs at low average levels of industrial development acquire highly sophisticated technological capabilities. For example, China and India have developed fairly sophisticated aerospace and nuclear industries, while Brazil and Israel are exporting significant quantities of aircraft and other military hardware. In semiconductors, the Koreans are now significant global competitors in memory chips, and Korean and Taiwanese firms are producing inexpensive versions of personal computers (PCS). For example, Samsung of Korea and Tatung of Taiwan are now moving from being private-label suppliers to developing brand-name recognition for their electronic products in the US market.[4]

The global economy is also undergoing a number of significant other geopolitical changes. In addition to the rise of the NICs, the global economy also faces challenges posed by the restructured and revitalized East European, Soviet, and Chinese economies as they privatize large sectors and harness the power of individual economic incentives. These economies are emerging as more significant factors in the global economy. The United States no longer dominates the global economy and significant trends towards the formation of regional economic blocs seem to be accelerating. It is possible that the world economy may soon be characterized by four major regional groups with significant intra-regional trade and investment but little inter-regional trade and investment, i.e., North America with the United States, Canada, Mexico, and possibly other Latin American countries in a free-trade type association; Western Europe with the EC and the EFTA; the Soviet Union with Eastern Europe: and the Asia–Pacific region with Japan, Australia, and other Asian countries.

The globalization of product markets also means that the market power of firms within each individual country is now less important, gradually replacing the need for national government regulation of anti-trust and other business activity possibly with multinationally-coordinated regulation in the context of regional economic groups, such as North America, the European Economic Community, or East Asia. National markets are being increasingly deregulated resulting in the emergence of new business opportunities and challenges. The global expansion of business firms is being driven by advances in the technology of telecommunications and microcomputing, by the growth and deregulation of financial markets in each country, and by the significant recent reduction in cross-border barriers and the growing internationalization of product markets.

As this brief overview indicates, the global economy is currently undergoing significant structural change. This book edited by Webster and Dunning focuses on some of these changes in the industrial structure of the global economy. It is a collection of eleven contributed scholarly and empirical papers on the international aspects of these changes in the world economy. The book is divided into three parts: the context of structural change, causes of change in the world economy, and policy and structural change.

The first part of this book consists of three chapters with the first chapter being an introduction by the editors where they review the other chapters. Chapter 2 by John Reynolds, a senior economist for Pru-Bache in London, examines the causes of the

recent decline in the role of manufacturing in the UK economy. He notes that UK industry has recovered slightly in recent years but stresses the commonly expressed need for manufacturing to expand more in high technology and high value-added sectors. It may be of interest here that manufacturing in the United States has not declined as it has remained near 24 per cent of GNP even though manufacturing employment in the United States continues to decline.[5] This chapter does not seem to conform to the overall theme of the book as it does not discuss the decline of UK manufacturing in a global context. Chapter 3 by Stephen Nicholas, an American-educated economist from Australia, provides a useful historical perspective by briefly reviewing the economic growth and decline of countries such as Britain and Spain.

Part two of this collection on causes of change in the world economy consists of five chapters, i.e., chapters 4–8. Chapter 4 by Kristy Hughes, a University of Manchester economist, analyzes differences in the role of innovation in the economies of the United States, UK, Japan, and West Germany. This chapter notes that national differences in research and development policies may be less important in the future because of the rise of multinational companies. Chapter 5 by Peter Gray, a professor of economics at Rensselaer Polytechnic, assesses the growing employment in the services sector. Professor Gray notes that the rise of knowledge intensive industries has altered the division of labor among economies, that international trade in services among the industrialized countries is growing rapidly, and that these changes are leading to a greater centralization of control in multinational companies with attendant fresh challenges to national sovereignty. Chapter 6 by John Cantwell, an economist colleague of Professor Dunning at the University of Reading, examines the reasons, such as ownership and locational advantages, for the growing internationalization of developed country business firms in the 1974–1982 time period. He contends that the growing internationalization of European and Japanese firms is a result of the need for them to compete with US firms. Chapter 7 by Jeremy Clegg, a lecturer in Business Economics at the University of Bath, is an analysis of intra-industry foreign direct investment (FDI). In contrast to traditional comparative advantage based explanations offered for inter-industry trade and investment, Clegg suggests that intra-industry FDI can best be explained by the increasing importance of ownership advantages that accompany increasing product differentiation and greater economies of scope, and by the need to engage in FDI as a strategic response to global competition among firms from different nations. Chapter 8 by Robert Pearce, another economist colleague of John Dunning from the University of Reading, examines data for the 1977–1982 period and contends that there is a significant tendency toward increased industrial diversification among the 355 large multinational firms that he examined. However, it should be noted that this statistically significant finding is based on a change from 22.8 per cent in 1977 to only 24.4 per cent in 1982 in the average proportion of sales that are outside the firms "main" activity (p. 144).

Part three of this collection covers policy issues and consists of four chapters. Chapter 9 by John Dunning, the co-editor of this collection and the ICI Research Professor at the University of Reading, examines the competitive advantage of Japanese FDI and its role in the restructuring of the UK economy. Dunning notes that the UK economy is the largest European recipient of foreign FDI and foreign owned

companies now account for approximately one-fifth of British industrial production. He suggests that UK government industrial policy should be modified to encourage greater government–industry cooperation to take better advantage of this rising wave of inward FDI and to maintain the international competitiveness of British firms. Chapter 10 by Chris Milner, an economics lecturer at Loughborough University, examines the effects of the various multilateral rounds of tariff reductions in the post-World War II period. He notes that the reciprocal nature of these tariff reductions has favored increases in intra-industry trade. Chapter 1 1 by David Greenway, examines volume and ratio based voluntary export restraints (VERs). He notes that ratio VERs are preferred by highly concentrated domestic industries. Chapter 12 by Allan Webster, a co-editor of this volume and another economics colleague of John Dunning at the University of Reading, focuses on the role of skills subsidies in international trade policies. He suggests that skills subsidies perform well as components of industrial policy when adopted by many countries simultaneously.

Thus, a major theme of this scholarly book is the growing interdependence of the world's leading capitalist economies. Given the backgrounds of the contributors, many of this book's chapters are understandably concerned with the effects of these changes on the British economy. The book also discusses other developed economies, but deals primarily with changes that are common across many open economies and ignores influences that are specific to an individual economy. It also ignores the growing role of East–West economic cooperation. Nevertheless, this book on changes in the world economy should be a useful addition to the library of an international accountant.

Raj Aggarwal,
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Ohio USA

Footnotes

1. Raj Agarwal and Charles H. Gibson, *Discounting in Financial Accounting and Reporting* (Morristown, NJ: Financial Executives Research Foundation, 1989).
2. Frederick D.S. Choi and Gerhard G . Mueller, *Frontiers of International Accounting* (Ann Arbor, MI: UMI Research Press, 1985).
3. Nicholas J. Gonedes and Nicholas Dopuch, *Analysis of Financial Statements: Financial Accounting and the Capital Market* (Sarasota, FL: American Accounting Association, Studies in Accounting Research #30, 1988).
4. Raj Aggarwal, "The Strategic Challenge of the Evolving Global Economy." *Business Horizons* 30 (4, July–August 1987), 38–44.
5. Raj Aggarwal, "Technology Transfer and Economic Growth: A Historical Perspective on Current Developments." Chapter 4 in Tamir Agmon and Mary Ann von Glinow, eds., *Technology Transfer in International Business* (New York: Cambridge University Press, 1991).

C. A. Bana e Costa, Technical University of Lisbon (Ed.)

Readings in Multiple Criteria Decision Aid

1990. XII, 660 pp. 124 figs. 40 tabs.
Hardcover DM 178,– ISBN 3-540-52950-0

This book covers the different trends in MCDA Research, not only in terms of "methods" but also in discussion of fundamental methodological aspects, basic theoretical concepts and conditions and problems embodying a robust real-world decision aid practice. Emphasis is also given on MCDA software descriptions, which are significant tools for aiding "analysts" in aiding "decision-makers".

L. F. Pau, Technical University of Denmark, Lyngby;
C. Gianotti, Milano

Economic and Financial Knowledge-Based Processing

1990. XV, 364 pp. 67 figs. 12 tabs.
Hardcover DM 128,– ISBN 3-540-53043-6

As banks, financial services, insurances, and economic research units worldwide strive to add knowledge based capabilities to their analyses and services, or to create new ones, this volume aims to provide them with concrete tools, methods and application possibilities. The tutorial component of the book relies on case study illustrations, and on source code in some of the major artificial intelligence languages.

M. J. Liberatore, Villanova University, Villanova, PA (Ed.)

Selection and Evaluation of Advanced Manufacturing Technologies

With contributions by numerous experts

1990. VI, 324 pp. 23 figs. 52 tabs. Hardcover
DM 120,– ISBN 3-540-52656-0

This book contains thoughtful reviews and critiques of current selection and evaluation methods and trends. New ideas, methods and approaches are offered as well. The book is organized into three sections: innovation issues, methods and applications, and performance measurement. Applications and case studies are incorporated throughout the text, and illustrate the concepts and techniques presented. Specific topics include new studies on the adoption, diffusion and evaluation of specific technologies; the manager's role in the evaluation process; new multicriteria evaluation methods linked to the strategic plan of the firm; developments in performance measurement and management accounting, such as activity-based costing; and the measurement of flexibility.

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting." Accountancy (March 1972), 4-8.

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American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.
__________. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.
Lorenson, Leonard and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, 98-102.
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The Impact of Fluctuating Exchange Rates on US Multinational Corporate Budgeting for, and Performance Evaluation of, Foreign Subsidiaries

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Key words: Currency exchange rates; Foreign subsidiaries; Multinational budgeting; Performance evaluation

Abstract: *This paper reports on the methods used by US based multinational corporations to incorporate exchange rates in foreign subsidiary operating budgets in both hard and soft currency countries and in comparing actual performances against budget. The results indicate that both the US dollar and the local currency are routinely employed for both. Many US based multinational corporations do differentiate between hard and soft currency environments and between hyperinflationary and non-hyperinflationary soft currency countries in determining exchange rates used for budgeting for foreign subsidiaries and for evaluating foreign subsidiary management performance against budget.*

Introduction

This paper reports the findings of the authors' recent empirical study of the methods used by US based multinational corporations (MNCs) to incorporate exchange rates in foreign subsidiary operating budgets and in comparing actual performance against budget. The implications for the performance evaluation of foreign subsidiary managers is discussed. Foreign exchange movements have a pervasive influence on all aspects of multinational operations, and the more volatile the exchange rate movements, the more critical the translation issue is to performance evaluation.

Hard currencies tend to be less volatile than soft currencies. This can be demonstrated statistically by calculating standardized coefficients of exchange rate variation against a reference basket of currencies, such as the European Community's

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Special Drawing Right (SDR), or against the US dollar. Employing International Monetary Fund data for end-of-quarter national currency values from the first quarter, 1986, through the third quarter, 1989, the authors calculated the standard deviation for each national currency (See Appendix) for 15 industrialized and 102 less industrialized countries. To provide normalized indices, the individual country standard deviations were divided by their respective means and the results converted to percentages to arrive at coefficients of exchange rate variation. Coefficients of exchange rate variation were calculated for percentage variation of end-of-quarter national currency values of the SDR and end-of-quarter average market exchange rates of national currency units per US dollar. The results were divided into two groups, industrialized and less industrialized. Average group variations were also calculated for each index of currency variation. A *t*-test of means was performed. The results indicate significant difference in mean variation between the groups for both reference currency measures. Thus, subsidiaries of US corporations in hard currency countries are much less likely to experience adverse currency fluctuations than are those in soft currency countries.

To evaluate the performance of subsidiaries in soft currency environments in the same manner as that of those in hard currency environments might not be desirable. A performance evaluation system which does not incorporate means to make allowances for foreign currency environmental differences could result in performance anomalies detrimental to the MNC's global well-being.

A serious question then arises as to whether and how US based parents of multinational corporations budget for and evaluate the performance of foreign subsidiaries in different foreign currency environments. To administer effectively a geographically widely dispersed, multinational corporation, there must be an adequate flow of decision-relevant information. Among the most important relevant information sources are the budget and subsequent performance against the budget. In a single national environment with a single currency regime, the budgeting and later performance evaluation against budget processes are much less complex than they are in a multinational corporate environment (Fig. 1). A US based multinational corporation must have information of the budget and performance of subsidiaries which may operate in different foreign currency environments, hard and soft. Within the soft currency countries, one can distinguish between the non-hyperinflationary countries and the hyperinflationary countries.[1] Thus, there are multidirectional flows of information between the parent in the United States and subsidiaries in hard and soft currency countries, as well as between and among the foreign subsidiaries themselves. The focus of the current study is upon (1) the flow of budget information between the US parent and its foreign subsidiaries in both hard and soft currency countries and the manner(s) in which the US parent corporation factors into consideration the impact of foreign exchange movements upon information transfers, and (2) in the process of evaluating performance against budget in both countries, which experience small foreign exchange rate variances, and soft currency countries, which experience relatively larger foreign exchange rate variance.

Robbins and Stobaugh (1973) make a strong case for using the budget tailored to each foreign subsidiary to judge its management's performance. Since MNCs conduct business in more than one currency, corporate headquarters must determine to what

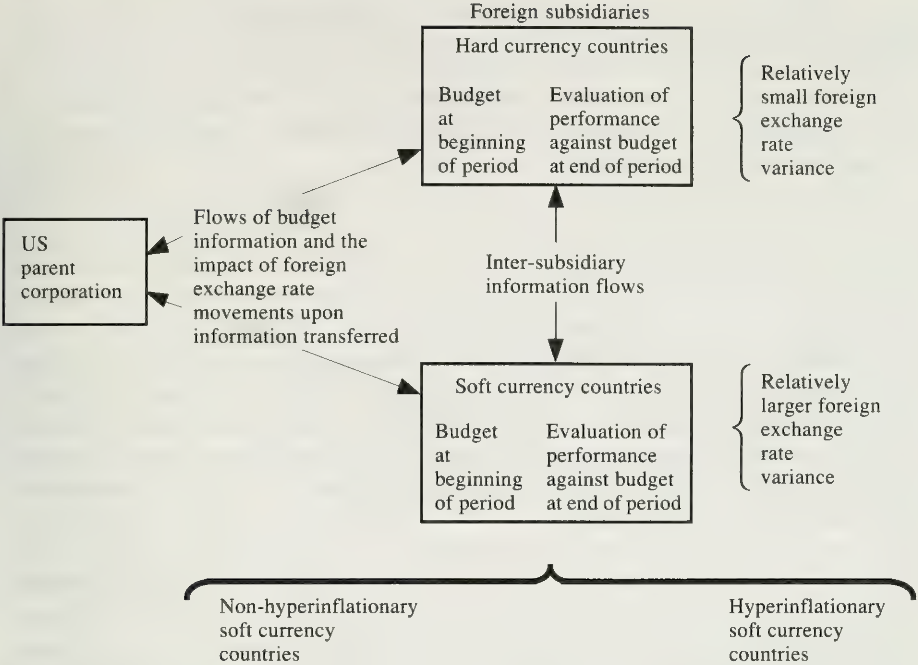

Fig. 1. The flow of budget information between the US parent and its foreign subsidiaries in hard and soft currency countries.

extent the managers of foreign subsidiaries are to be responsible for foreign exchange losses. In an international environment characterized by fluctuating exchange rates, the parent must decide whether to employ the local currency and/or the home currency to evaluate the performance of each foreign subsidiary. In such an environment, the operating performance of foreign subsidiaries is exposed to the effects of movements in exchange rates. Thus, when the *home* currency is used for evaluation purposes, it is necessary to have performance measures which accurately convert subsidiary foreign currency net worth into parent currency and also incorporate the effects of exchange rate movements on foreign subsidiary operating revenues and expenses. When the *local* currency is used for evaluation, the parent company may overlook the fact that its foreign subsidiary's operating performance may be affected, sometimes dramatically, by the factors which cause currency devaluations and revaluations. Also when the *local* currency in used, comparability of subsidiaries in different currency environments is difficult to achieve. If all subsidiaries are evaluated using the *home* currency, achieving performance evaluation which is equitable to subsidiaries operating in different currency environments is hindered.[2] However, firms must use one or both, recognizing that there are the above mentioned limitations.

This rather complex operational problem is further complicated by the significant differences in foreign currency environments. The home environment may be a hard currency or a soft currency environment. The environments of foreign subsidiaries, likewise, may be hard currency or soft currency ones.

Thus, there are two interrelated questions of research interest:

1) Do US based MNCs differentiate between hard and soft currency environments in determining exchange rates used for budgeting for foreign subsidiaries?
2) Do they differentiate between them for evaluating foreign subsidiary management performance against budget?

Research Issues

Assumptions of the future movements of exchange rates and their impact on the multinational corporation are implicit in the control processes of an MNC. In any given time-period operating decisions mirror MNC management's anticipations of future exchange rate movements and their impact on performance. Exchange rates are incorporated in the control processes (1) when the operating budget for a particular time period is determined; and (2) when realized performance relative to the budget is evaluated.[3]

A number of issues are involved in accounting for exchange rate movements in measuring the performance of foreign subsidiary managers. First, which currency rate should be employed to translate local operating budgets and actually achieved performance? Second, to what degree should exchange rate variance be incorporated in evaluating managers' performance? For example, should foreign subsidiary managers be held responsible for operating exposure effects caused by adverse exchange rate movements? Third, should the performance of MNC subsidiary managers in soft currency environments be evaluated in the same manner as that of managers in hard currency ones?

In his study of UK based multinational corporations international budgeting and exchange rates, Demirag (1986), elaborating upon Lessard and Lorange (1977), has identified four possible exchange rates employable in setting the operating budget and five main possibilities employable in comparing actual performances relative to the budget.

The exchange rates usable in determining the operating budget are: (1) the actual spot rate at the time the budget is prepared; (2) a forecast average rate for the budget period; or (3) a forecast rate for the end of the budget period. Additionally, (4) the budgeted rate can be continuously updated to reflect exchange rate changes.

The exchange rates useful in comparing actual performance against budget are: (1) the actual rate at the time the budget was prepared; (2) the forecast average rate at the time the budget was prepared; (3) the forecast rate for the end of the budget period; (4) the actual average rate for the budget period; and (5) the actual exchange rate at the end of the period. Therefore, in theory, twenty possible combinations of exchange rate can be used; in practice, however, Demirag identified nine possible logical combinations of exchange rates for setting budgets and subsequent evaluation of actual performance compared to budget. Cross-tabulating exchange rates used for budgeting by UK MNCs with exchange rates used for performance evaluation, Demirag identified the following nine logical combinations: (1) initial by initial; (2) forecast (average) by forecast (average); (3) forecast (end of period) by forecast

(end of period); (4) initial by actual (average): (5) forecast (average) by actual (average); (6) initial by actual (ending); (7) forecast (average) by actual (ending); (8) forecast (end of period) by actual (ending); and (9) actual (continuously updated) by actual (ending).[4]

One can illustrate the impact of Demirag's nine logical combinations upon performance evaluation against budget with a relatively simple example.[5] The following facts are assumed: (1) expected foreign subsidiary volume is 1000 units; (2) the expected local currency (LC) price, LC1, is held constant throughout the period; and (3) actual volume is 800 units. Thus, the variation from budget will consist of a volume variance of 200 units and a variable foreign exchange rate variance depending upon which logical combination of exchange rates is employed for budgeting and for performance evaluation (Table 1). As can be seen from the Table 2 calculations, when the same exchange rates are used for budgeting and performance evaluation, FXR combinations (1), (2), (3), and (9), the foreign exchange rate variance is zero; in those circumstances, total variance equals the volume variance. In these situations, the foreign subsidiary manager could be held responsible for volume deviations from budget, but not for changes in foreign exchange rates. In FXR combinations (4), (6), (7) and (8), the foreign exchange rate variance is greater than the volume variance. Combinations (4) and (6) employ initial exchange rates for budgeting and actual exchange rates for evaluation, thus placing responsibility for currency movements upon the local operating managers while combinations (7) and (8) employ forecast exchange rates for budgeting, thereby incorporating expected currency fluctuations at the budgeting stage, and actual exchange rates for evaluation; thus, unexpected foreign exchange rate variations are highlighted. Combination (5) smoothes the difference between the budget and performance evaluation exchange rates by averaging the fluctuations in actual exchange rates over the period. Thus, if the same foreign exchange rate is used for budgeting and performance evaluation, foreign subsidiary management is held accountable for volume variance only; foreign exchange fluctuations are lost. Use of different exchange rates for budgeting and performance evaluation highlight both volume variance and foreign exchange rate variance. The magnitude of both variances, volume and foreign exchange rate, depends upon the spread between the value of the budgeting exchange rate and the performance evaluation exchange rate.

At the heart of the choice of the exchange rates for budgeting and performance evaluation lies the corporation's view of the appropriate way of regarding foreign exchange rate movements, an average approach or a point approach. An average approach recognizes that foreign exchange rates move up and down, perhaps around a central tendency. The use of averages implies a willingness to attempt to smooth the variation over time. A point approach gives rise to the question which point in time should determine the foreign exchange rate for budgeting, which for performance evaluation, beginning of the period or end of the period. With the point approach there is no effort to smooth currency fluctuations.

In the above example, no reference is made to whether the local currency is hard or soft. The example merely demonstrates the impact of employing different exchange rates for budgeting and performance evaluation. The more volatile the currency, the greater the impact on total variance in general and upon the FXR variance in particular.

Table 1. Demirag's logical combinations of foreign exchange rates (FXRs) and variance analysis example

FACTS

Expected volume	1000 units	Actual volume	800 units
Expected LC price	1 LC	Actual LC price	1 LC
Initial exchange rate	1 LC = $0.50	Actual exchange rates:	
Forecast exchange rates:		Average	1 LC = $0.35
Average	1 LC = $0.40	End of period	1 LC = $0.20
End of period	1 LC = $0.25		

Budget | Actual

(1) Initial by Initial

Expected volume	×	Expected LC price	×	Initial FXR	=	Budget	Actual volume	×	Actual LC price	×	Initial FXR	=	Performance
1,000	×	1	×	$0.50	=	$500	800	×	1	×	$0.50	=	$400

Total variance	=	Volume variance	+	FXR variance
[$500–400]	=	[200 units×($0.50)]	+	0
$100	=	$100	+	0

(2) Forecast (avg.) by Forecast (avg.)

Expected volume	×	Expected LC price	×	Forecast (avg.) FXR	=	Budget	Actual volume	×	Actual LC price	×	Forecast (avg.) FXR	=	Performance
1,000	×	1	×	$0.40	=	$400	800	×	1	×	$0.40	=	$320

Total variance	=	Volume variance	+	FXR variance
[$400–320]	=	[200 units×($0.40)]	+	[1,000×($0.40–0.40)]
$80	=	$80	+	0

(3) Forecast [End of period (EOP)] by Forecast (end of period)

Expected volume	×	Expected LC price	×	Forecast EOP FXR	=	Budget	Actual volume	×	Actual LC price	×	Forecast EOP FXR	=	Performance
1,000	×	1	×	$0.25	=	$250	800	×	1	×	$0.25	=	$200

Total variance	=	Volume variance	+	FXR variance
[$250–200]	=	$50	+	0
$50	=	$50	+	0

(4) Initial by Actual (average)

Expected volume	×	Expected LC price	×	Initial FXR FXR	=	Budget	Actual volume	×	Actual LC price	×	Actual (avg.) FXR	=	Performance
1,000	×	1	×	$0.50	=	$500	800	×	1	×	$0.35	=	$280

Total variance	=	Volume variance	+	FXR variance
[$500–280]	=	[200 ×($0.35)]	+	[1,000×($0.50–0.35)]
$220	=	$70	+	$150

(5) Forecast (avg.) by Actual (avg.)

Expected volume	×	Expected LC price	×	Forecast (avg.) FXR	=	Budget	Actual volume	×	Actual LC price	×	Actual (avg.) FXR	=	Performance
1,000	×	1	×	$0.40	=	$400	800	×	1	×	$0.35	=	$280

Total variance	=	Volume variance	+	FXR variance
[$400–280]	=	[200 ×($0.35)]	+	[1,000×($0.40–0.35)]
$120	=	$70	+	$50

Table 1. continued

Budget | Actual

(6) Initial by Actual (ending)

Expected volume	×	Expected LC price	×	Initial FXR	=	Budget	Actual volume	×	Actual LC price	×	Actual (ending) FXR	=	Performance
1,000	×	1	×	$0.50	=	$500	800	×	1	×	$0.20	=	$160

Total variance	=	Volume variance	+	FXR variance
[$500–160]	=	[200 ×($0.20)]	+	[1,000×($0.50–0.20)]
$340	=	$40	+	300

(7) Forecast (avg.) by Actual (EOP)

Expected volume	×	Expected LC price	×	Forecast (avg.) FXR	=	Budget	Actual volume	×	Actual LC price	×	Actual (EOP) FXR	=	Performance
1,000	×	1	×	$0.40	=	$400	800	×	1	×	$0.20	=	$160

Total variance	=	Volume variance	+	FXR variance
[$400–160]	=	[200 ×($0.20)]	+	[1,000×($0.40–0.20]
$240	=	$40	+	200

(8) Forecast (EOP) by Actual (EOP)

Expected volume	×	Expected LC price	×	Forecast (avg.) FXR	=	Budget	Actual volume	×	Actual LC price	×	Actual (avg.) FXR	=	Performance
1,000	×	1	×	$0.25	=	$250	800	×	1	×	$0.20	=	$160

Total variance	=	Volume variance	+	FXR variance
[$250–160]	=	[200 ×($0.20)]	+	[1,000×($0.25–0.20)]
$90	=	$40	+	50

(9) Actual (updated continuously) by Actual (EOP)

Expected volume	×	Expected LC price	×	Actual (updated continuously)	=	Budget	Actual volume	×	Actual LC price	×	Actual (EOP)	=	Performance
1,000	×	1	×	$0.20	=	$200	800	×	1	×	$0.20	=	$160

Total variance	=	Volume variance	+	FXR variance
[$200–160]	=	[200 ×($0.20)]	+	[1,000×($0.20–0.20)]
$40	=	$40	+	0

Missing in both the Lessard and Lorange and the Demirag analyses was an effort to explore whether MNCs determine budgets and evaluate budget performance in the same manner, or differently, for subsidiaries in hard currency vs. soft currency environments. Since hard currency environments are less volatile than soft currency ones generally, the currency exchange rate method employed to prepare the budgets for hard currency environments may not be appropriate for soft currency ones. The currency exchange rate method employed for evaluating performance against budget may not be appropriate. If the exchange rate used to develop the budget is the actual exchange rate at the beginning of the period, in both hard and soft currency countries, and the rate used to evaluate results is the actual rate at the end of the period, the foreign subsidiary manager will absorb the total impact of exchange rate fluctuations.[6] In hard currency countries where relative exchange rate fluctuations against the US

dollar are likely to be relatively small, this approach will have a less marked impact upon performance evaluation than in soft currency countries where relative exchange rate fluctuations against the US dollar may be rather pronounced. In such soft currency countries, it might be more appropriate to use a projected exchange rate for developing the budget. The variance between budget based upon a projected rate, and performance evaluated at the actual end of period rate is likely to be smaller, and the evaluation of the foreign subsidiary manager perceived as more fair. Thus, two interrelated questions of research interest are (1) whether US based MNCs differentiate between hard and soft currency environments in determining exchange rates used for budgeting for foreign subsidiaries; and (2) whether they differentiate between them for evaluating foreign subsidiary management performance against budget.

Data and Methodology

The empirical data for the study were compiled during late 1988 from a two-phase questionnaire survey of 576 US based corporations identified from the *Business Week* Global 1000 list and the *Fortune* 500 list. The questionnaire was addressed to the corporate controller with a note to indicate that the authors wished it "be completed by someone... knowledgeable of your firm's transfer pricing policy." Respondents were asked to return the blank questionnaire "if your firm is no longer involved in transfer pricing situations." The data were derived from a seven-page, comprehensive questionnaire which contained questions relevant to the performance evaluation policies and practices of US based MNCs, transfer pricing policies and practices, exchange rate(s) used for determining operating budgets and evaluating performance against budget, the effect of floating exchange rates on transfer pricing practices and foreign subsidiary managers' input into international transfer pricing policies.*

The mailed questionnaire was supplemented with data from a telephone survey of fifteen US corporate executives at the vice presidential level conducted in February 1990. Of the 25 companies contacted, 15 responded and spent 15–20 minutes each discussing a brief questionnaire* which the authors had mailed to them in January 1990.

The total number of questionnaire responses was 230 (40%), of which 76 (13.2%) were positive, usable responses. A few firms did not complete the entire questionnaire as portions of it were irrelevant to their particular operations. For the information value which such questionnaires contained, they were classified among the positive, usable responses. Thirty-four unusable responses (5.9%) were received from firms whose corporate policy, generally, was *not* to respond to survey questionnaires. Of the ineligible firms responding, 42 (7.3%) indicated they had insignificant transfer pricing, and 73 (12.2%) indicated they were primarily, in some cases exclusively, domestic corporations (Table 2).

As might be expected, the majority of respondents who provided usable responses were employed by manufacturing concerns; there were a few from financial institutions, such as international banks. Respondents were asked to provide certain

*A copy of the questionnaire is available on request from the author.

Table 2. Analysis of the responses of the sample firms

		Total	%
Number of companies to which questionnaire was sent		576	
Eligible firms			
Positive response	76		13.2
Negative response: policy not to answer questionnaire surveys	27		4.2
Other	7		1.2
		110	
Ineligible firms			
Undeliverable	5		1
Not suitable for participation			
Domestic corporations ony	73		12.2
Insignificant transfer pricing	42		7.3
		120	
Total responses		230	40.0
No response		346	60.0

demographic information regarding company characteristics as of the end of fiscal year 1987 (Table 3). The average number of employees worldwide of each firm was 30 005; the range was from 215 to 190 000. The total number of employees outside the United States averaged 8879; the range was from zero to 74 800. Total US dollar sales worldwide averaged $4.282 billion; they ranged from approximately $1 million to $34.372 billion. Sales outside the United States, in US dollars, averaged $1.315 billion; the range was from less than $1 million to $17.12 billion. Thus, sales within the United States averaged more than 2.25 times as much as sales abroad. The US dollar value of exports from US subsidiaries to foreign subsidiaries averaged $129 million; they ranged from less than $1 million to $17.66 billion. But the US dollar average value of imports from foreign subsidiaries to US subsidiaries was $5.709 million; the range was from less than $1 million to $400 million. Thus, the US dollar value of imports from foreign subsidiaries to US subsidiaries averaged more than 44 times as much as the US dollar value of exports from US subsidiaries to them. The survey respondents represented a wide range of companies with different size characteristics. When the companies were grouped by US dollar volume of foreign sales, the following results were obtained: less than $100 million, 14 companies; between $100 and $500 million, 26 companies; and over $500 million, 36 companies.

Table 3. Company characteristics as of end of fiscal year 1987

	Average	Range
Total number of employees worldwide	30 194	215–190 000
Total number of employees outside USA	8879	0–74 800
Total sales worldwide (US dollars)	$428 000 000	$1 000 000–$34 372 000 000
Sales outside USA (US dollars)	$1 315 000 000	less than $1 000 000–$17 120 000 000
Value of exports from US subsidiaries to foreign subsidiaries (US dollars)	$129 000 000	less than $1 000 000–$17 660 000 000
Value of imports from foreign subsidiaries to US subsidiaries (US dollars)	$5 709 000 000	less than $1 000 000–$400 000 000

Respondents were asked to indicate (1) which of the four exchange rate(s) discussed earlier in the paper their companies used for determining budgets for their foreign subsidiaries depending on characteristics of the foreign currency, hard, such as the German mark or Japanese yen, or soft, such as the Brazilian cruzado or Mexican peso; and (2) which of the five exchange rates their companies used for evaluating management performance against budget depending upon the characteristics of the foreign currency, hard or soft. Definitions of hard and soft were not given, rather examples were given. Respondents were permitted to check more than one exchange rate, if appropriate. This enabled the researchers to obtain more information of corporate behavior in these areas; however, allowing respondents to check more than one response invalidated efforts to employ *t*-tests of significance of results. Statistical tests of significance of results were generally hampered by the absence of sufficient data to perform valid tests.

Frequency tables were constructed to determine (1) which foreign exchange rates, hard or soft, were used for budgeting and for performance evaluation of foreign subsidiary managers; and (2) how many firms used how many foreign exchange rates, hard or soft, for budgeting, and how many foreign exchange rates were used for evaluating foreign subsidiary management performance.

Cross tabulations of foreign exchange rates used for budgeting by foreign exchange rates used for performance evaluation were constructed for hard foreign currencies and soft foreign currencies. In order to construct meaningful two way tables, it was necessary to drop from the data set those firms which employed more than one foreign exchange rate for budgeting and/or for performance evaluation. When more than one exchange rate was used for budgeting and/or performance evaluation, it was impossible to determine which combination of exchange rates was used for both and under which circumstances they were used. Thus, in the construction of the two-way tables, these companies are not represented. Rather, a subset of the total data set, comprising those companies which employed one exchange rate for budgeting and one for performance evaluation, was included.

Results

Respondents were asked to check all appropriate geographic regions in which their foreign subsidiaries are located: Canada, Europe, Latin America, Africa, the Middle East, Asia. The 76 respondents who provided usable returns indicated that they had more foreign subsidiaries in what are typically regarded as harder currency regions, Canada, Europe, and Asia, than in soft currency regions, Latin America, Africa, and the Middle East. The mean number of countries in which foreign subsidiaries were located was 23.6, the range was from 1 to 150 (Table 4). Nearly twice as many firms had subsidiaries in Canada, Europe, and Asia, on average, than had subsidiaries in Latin America, Africa, and the Middle East.

The fact that more subsidiaries were located in hard currency regions than in soft is mirrored in the responses to the questions regarding foreign exchange rates used for budgeting and performance evaluation in hard currency versus soft currency situations. More responses were received for the hard currency questions than for

Table 4. Geographic regions in which foreign subsidiaries of US based multinational respondents are located

	Number of companies	%
Canada	66	83.5
Europe	72	91.1
Asia	61	77.2
Latin America	53	67.1
Africa	27	34.2
Middle East	26	32.9

the soft (Table 5). Some firms (18) had foreign subsidiaries only in hard currency countries; one had foreign subsidiaries only in soft currency countries. Several either indicated that this section of the questionnaire was not applicable to their particular operations, or made no response. Two indicated which exchange rates they use for budgeting in hard currency countries (three in soft), but not for performance evaluation. Altogether, 49 firms indicated that they had foreign subsidiaries in both hard and soft currency countries, and which foreign exchange rates they employed for budgeting and performance evaluation in both.

As noted, we asked the respondents to indicate (1) which exchange rate(s) are used for determining budgeting and for evaluating management performance against budget depending on the characteristic of foreign currency, hard or soft. Respondents were permitted to check more than one exchange rate, if appropriate. The majority of respondents indicated that their firms employed one foreign exchange rate for budgeting, whether hard or soft, and for performance evaluation. Fewer than 15 per

Table 5. Number of exchange rates employed

	Character of foreign currency			
	Hard		Soft	
Number of Exchange rates	Number of companies	Positive responses %	Number of companies	Positive responses %
For budgeting				
1	57	85.1	44	88.0
2	5	7.5	4	8.0
3	0	0.0	0	0.0
4	5	7.5	2	4.0
	67		50	
No response	9		26	
	76		76	
For performance evaluation				
1	52	80.0	41	87.2
2	8	12.3	5	10.6
3	2	3.1	0	0.0
4	0	0.0	0	0.0
5	3	4.6	1	2.1
	65		47	
No response	11		29	
	76		76	

Table 6. Exchange rate(s) used for determining budgeting for foreign subsidiaries in hard vs. soft currency countries (multiple responses were permitted)

Type of foreign exchange rate	Character of foreign currency	
	Hard	Soft
Initial	18	7
Forecast (average)	44	34
Forecast (end of period)	10	5
Actual (continuously updated)	16	15

cent used two or more foreign exchange rates for budgeting, whether hard or soft, and fewer than 20 per cent used two or more for performance evaluation.

Respondents indicated that the most frequently used exchange rate for budgeting was the forecast (average) rate for foreign subsidiaries in both hard and soft currency countries. For budgeting for subsidiaries in hard currency countries, the second most commonly used exchange rate was the initial rate; the third most commonly used was the actual rate (continuously updated). In contrast, the second most commonly used foreign exchange rate employed for budgeting for subsidiaries in soft currency environments was the actual rate (continuously updated); the third most commonly used was the initial rate (Table 6). That firms would more frequently choose the initial rate as the foreign exchange rate for budgeting for foreign subsidiaries in hard currency countries than in soft currency countries makes sense in that relative currency movements of hard currencies against the dollar are less volatile than those of soft currencies. On the other hand, the fact that firms relatively more often chose the actual exchange rate (continuously updated) for budgeting for subsidiaries in soft currency countries than in hard recognizes that actual exchange rates are better tools for budgeting in soft currency environments with constantly shifting relative exchange rates than are initial exchange rates. This is less crucial in hard currency countries where relative exchange rates tend to fluctuate to a less pronounced degree against the US dollar. For both hard and soft currencies, the least frequently used exchange rate was the forecast (end of period). Perhaps, the difficulty of projecting a reasonably accurate end of period exchange rate accounts for its comparatively infrequent employment by firms.

Regarding the exchange rate(s) used for evaluating management performance against budget depending on the characteristic of the foreign currency, respondents indicated that, in both hard and soft currency countries, the most commonly used

Table 7. Exchange rate(s) used for performance evaluation for foreign subsidiaries in hard vs. soft currency countries (multiple responses were permitted)

Type of foreign exchange rate	Character of foreign currency	
	Hard	Soft
Initial	12	4
Forecast (average)	21	14
Forecast (end of period)	5	2
Actual (average)	33	25
Actual (ending)	11	5
Other	7	8

exchange rate was the actual (average) rate; the second most commonly employed was the forecast (average) rate (Table 7). For hard currency countries, the third most commonly used was the initial rate; for soft currency countries, it was "other". That the initial rate was used relatively more frequently in hard currency countries undoubtedly reflects their comparatively greater currency stability against the dollar. For both hard and soft currency countries, the fourth most commonly used exchange rate was the actual (ending) rate.

When one combines the actual (average) with the actual (ending), the actual rate is employed nearly twice as frequently for performance evaluation in both hard and soft currency countries than the combined forecast (average) and forecast (end of period). The forecast rates are used more than twice as frequently as the initial rates in both hard and soft currency countries. These observations clearly indicate that US based MNCs are aware of the need to incorporate changes in relative exchange rates from the beginning of the budget period to the end of the period in the evaluation of foreign subsidiary management performance against budget, with some sort of actual exchange rate preferred over all others.

The results of the cross tabulations of foreign exchange rates used for budgeting versus foreign exchange rates used to evaluate foreign subsidiary management performance in hard and soft currency countries are discussed below. In his study of UK MNCs, Demirag identified 11 illogical combinations, the shaded cells of Figs. 2 and 3. With the exception of cell D-4 of Figs. 2 and 3 the results of the current study support Demirag's conclusion that the shaded combinations are illogical; they will

	Rates used for performance evaluation: hard currency countries						
Rates used for determining budgets	Initial	Forecast (average)	Forecast (end of period)	Actual (average)	Actual (ending)	Others	Total number of US MNCs
Initial	A–1 5 MNCs (10.20%)	A–2 –0–	A–3 –0–	A–4 3 MNCs (6.12%)	A–5 1 MNC (2.04%)	A–6 –0–	9 MNCs (18.37%)
Forecast (average)	B–1 –0–	B–2 13 MNCs (26.53%)	B–3 –0–	B–4 14 MNCs (28.57%)	B–5 –0–	B–6 3 MNCs (6.12%)	30 MNCs (61.22%)
Forecast (end of period)	C–1 –0–	C–2 –0–	C–3 –0–	C–4 –0–	C–5 –0–	C–6 1 MNC (2.04%)	1 MNC (2.04%)
Actual (continuously updated)	D–1 1 (2.04%)	D–2 –0–	D–3 –0–	D–4 3 MNCs (6.12%)	D–5 3 MNCs (6.12%)	D–6 2 MNCs (4.08%)	9 MNCs (18.37%)
Total number of US MNCs	6 MNCs (12.24%)	13 MNCs (26.53%)	–0– (0%)	20 MNCs (40.82%)	5 MNCs (10.20%)	5 MNCs (10.20%)	49 MNCs (100.0%)

Fig. 2. Combinations of exchange rates used for budgeting cross–tabulated with exchange rates used for performance evaluation. Number and per cent of the total 49 US based MNCs which reported using each combination of exchange rates for detrmining the budget and comparing the realized performance with the budget for subsidiaries in *hard* currency countries. The shaded boxes represent Demitag's 11 illogical combinations.

Rates used for determining budgets	Rates used for performance evaluation: hard currency countries: Initial	Forecast (average)	Forecast (end of period)	Actual (average)	Actual (ending)	Others	Total number of US MNCs
Initial	A–1 2 MNCs (5.41%)	A–2 –0–	A–3 –0–	A–4 –0–	A–5 –0–	A–6 –0–	2 MNCs (5.41)
Forecast (average)	B–1 –0–	B–2 10 MNCs (27.03%)	B–3 –0–	B–4 14 MNCs (29.73%)	B–5 –0–	B–6 3 MNCs (12.5%)	24 MNCs (64.86%)
Forecast (end of period)	C–1 –0–	C–2 –0–	C–3 –0–	C–4 1 MNC (2.70%)	C–5 –0–	C–6 1 MNC (2.04%)	1MNC (2.70%)
Actual (continuously updated)	D–1 1 MNCs (2.70%)	D–2 –0–	D–3 –0–	D–4 5 MNCs (13.51%)	D–5 3 MNCs (8.11%)	D–6 1 MNC (2.70%)	10 MNCs (27.03%)
Total number of US MNCs	3 MNCs (8.11%)	10 MNCs (27.03%)	–0– (0%)	17 MNCs (44.95%)	3 MNCs (8.11%)	4 MNCs (10.81)%	37 MNCs (100.0%)

Fig. 3. Combinations of exchange rates used for budgeting cross–tabulated with exchange rates used for performance evaluation. Number and per cent of the total 37 US based MNCs which reported using each combination of exchange rates for detrmining the budget and comparing the realized performance with the budget for subsidiaries in *soft* currency countries. The shaded boxes represent Demitag's 11 illogical combinations.

not be discussed further. The remaining 10 possible logical combinations are discussed with the results of the survey. Comparison is made throughout with Demirag's findings.

Cell A-1, Initial by Initial. Five MNCs (10.20%) with subsidiaries in hard currency countries, and two (5.41%) in soft, indicated they used this combination. Demirag reported 35.3 per cent of his UK respondents utilized this combination. With this approach actual exchange rates at the time of setting the budget are used for budgeting and the same exchange rates are later used for evaluating results against budget. This is equivalent to evaluating results in local currency terms. Consequently local subsidiary managers may not feel constrained to incorporate anticipated exchange rate changes into their operating results. This is a less significant concern in hard currency countries than in soft. US based MNCs seem to be aware of the drawbacks to using this particular approach, especially in soft currency countries, which would account for its less common usage by them compared with UK based MNCs.

Cells B-2 and C-3, Forecast (average and end of period) by Forecast (average and end of period). Thirteen MNCs (26.53%) with subsidiaries in hard currency countries, 10 (27.03%) in soft, reported they employed this combination. Demirag reported 31.7 per cent. The US respondents all indicated they employed forecast (average) at the time of setting the budget and forecast (average) later for evaluating results against budget. Demirag reported 20.0 per cent used forecast (average) for both, and 11.7 per cent used forecast (end of period).

The advantage to the use of the same forecast rates at both the budgeting and evaluation stages is that expected currency fluctuations are recognized at the budgeting

stage; unanticipated currency fluctuations are excluded. As a result the foreign subsidiary manager is not held accountable for unanticipated currency fluctuations, provided there was nothing he/she could do about them. While this is admittedly important for managers in hard currency countries, as well as in soft, it is more critical for foreign subsidiary managers in soft currency countries where such unanticipated, adverse exchange rate fluctuations are more likely to occur.

Cells D-4 and D–5, Actual (continuously updated) by Actual (average and ending). Three US MNCs with operations in hard currency countries and five in soft indicated combination D-4, actual (continuously updated) by actual (average). Demirag regarded this as an illogical combination and reported that no UK MNC used it. In the February 1990 telephone survey, the authors were able to speak with three of the respondents. As a result of these conversations, it became clear that two firms had responded erroneously. One employed a fixed forward rate (i.e., a forecast rate) for budgeting provided by the parent to the subsidiary once a year for performance evaluation, a monthly average rate was used to measure income statement performance. The second employed the actual exchange rate (continuously updated) and the actual (ending) exchange rate for performance evaluation. The third interviewee indicated that his parent company maintains a centralized data base of local currencies updated monthly. The reserve setting process is centralized, "Actuaries modify the preliminary numbers provided by the subs as they come in and return revised results to the subs in local currency units and dollars." In his firm, foreign subsidiary managers are not held responsible for translation and transaction gains (losses); these are budgeted in the United States or absorbed by the parent. Foreign subsidiary managers are to maximize results in local terms.

Regarding actual (continuously updated) by actual (ending), three US MNCs (6.12%) with operations in hard currency countries, and three (8.11%) in soft, indicated combination D–5, actual (continuously updated) by actual (ending); Demirag reported just one (1.1%). These combinations tend to result in evaluation of results in local currency terms. Exchange rate fluctuations, both anticipated and unanticipated, are constantly factored into the budget. Foreign currency translated results (average and ending) likewise incorporate exchange rate fluctuations. Foreign subsidiary managers are not held accountable for foreign currency fluctuations.

Cells A-4 and A-5, Initial by Actual (average and ending). Three US MNCs (6.12%) with subsidiaries in hard currency countries reported using combination A-4, one (2.04%) A-5. None with subsidiaries in soft currency countries used this approach. Demirag reported 1.1 per cent used A-4, and 8.2 per cent A-5. With this approach, local operating managers bear all the responsibility for exchange rate movements. While this could conceivably result in adverse evaluation of management performance in hard currency countries, it would be more likely to do so in soft currency countries where adverse currency fluctuations are much more difficult to anticipate than in hard. The fact that no US based MNCs with subsidiaries in soft currency countries use this approach suggests that they are aware of the difficulties of equitably applying it in an unstable currency environment.

Cells B-4, B-5, and C-5, Forecast (average and end of period) by Actual (average and ending). Fourteen (28.58%) US based MNCs with subsidiaries in hard currency countries, 11 (29.73%) in soft, used combination B-4, forecast (average) by actual (average). None employed B-5, and only one (2.04%) with a subsidiary in a hard currency country indicated C-5. Demirag reported 5.8 per cent used B-4, 8.4 per cent B-5, and 2.3 per cent C-5. These combinations employ forecast rates for determining the budget and the actual rates (usually an average rate) for comparing results. These sets of exchange rates hold foreign subsidiary managers responsible for the impact on performance of deviations from the forecast rates. This is likely to impact more heavily upon managers in soft currency countries than upon managers in hard.

In summary, there are notable differences in US MNCs' use of foreign exchange rates for budgeting and for performance evaluation in hard and soft currency countries in three out of five cases: Forecast by Forecast, and Forecast by Actual (Table 8). Also the results differ markedly from Demirag's earlier results, with less use of Initial by Initial by US respondents than UK respondents, and more use of Actual (continuously updated) by Actual (ending) and Forecast by Actual.

Table 8. Combinations of exchange rates used for budgeting cross–tabulated with exchange rates used for performance evaluation: a tabular summary (%)

	Kirsch/Johnson study		Demirag study
	Hard currency countries	Soft currency countries	
Initial by Initial	10.20%	5.41%	35.3%
Forecast (average and end of period) by Forecast (average and end of period)	26.53%	27.03%	31.7%
Actual (continuously updated by Actual (ending)	6.12%	13.51%	–0–[a]
Actual (continuously updated) by Actual (ending)	6.12%	8.11%	1.1%
Initial by Actual (average and ending)	8.16%	–0–%	9.2%
Forecast (average and end of period) by Actual (average and ending)	30.62%	29.73%	16.5%
Total	87.75%	83.79%	93.8%

[a] Demirag regarded this combination as illogical

Critical to the budgeting and performance evaluation processes is the question of which organizational level is responsible for foreign exchange rates for budgets? Seventy-one respondent firms answered this question. Forty-seven indicated the parent company was responsible either exclusively (17) or after consulting with foreign subsidiary management. Eighteen indicated the foreign subsidiary management was responsible either exclusively (9) or after consulting with the parent company. Thus, in 56 of the 71 responses (78.8%) the parent played a role in deciding the foreign exchange rate for budgeting (Table 9).

Once the budget foreign exchange rate has been set, there needs to be corporate flexibility to incorporate currency rate revisions during the budget period in response

Table 9. Organizational level responsible for preparation of foreign exchange rates for budgets

	Number	Level
	9	Foreign subsidiary management exclusively
	9	Foreign subsidiary management after consulting with the parent company management
	30	Parent company management after consulting with the foreign subsidiary management
	17	Parent company management exclusively
	2	Bought from commercial foreign exchange forecasting services
	4	Other
Total	71	

to currency movements. This is particularly critical when forecast exchange rates are used for budgeting and actual rates are used for performance evaluation. One advantage of using forecast rates is that they incorporate anticipated currency movements at the budgeting stage. However, if the budget exchange rate forecasts are poor, the amount of foreign exchange rate variance can be quite large at evaluation time when actual rates are used. Thus, it is important to know whether forecast rates are revised and for which reasons they are revised. Fifty-four (61.8%) of the 76 companies responding indicated they revise forecasted foreign exchange rates during a budget period (Table 10). Twenty-two indicated they never revise them. Sixteen marked other and gave various comments, including "revised for budget purposes only where a large variance from budget has occurred"; "revised when significant changes occur in the operating environment"; and "no forecast for hard in budget; soft revised continously."

The reasons (causes) given for revision of forecasted exchange rates during a budget are listed in Table 11. Those who marked "other" made such comments as

Table 10. Revision of forecasted exchange rates during a budget period

	Number	Response
	22	Never revised
	20	Whenever profit budgets are revised
	5	Usually once a year
	5	Usually twice a year
	8	Usually more than twice a year
	16	Other
Total	76	

"part of the normal reforecast process for all assumptions"; "devaluation (revaluation)"; and "reforecast quarterly".

Some of the comments given on the original questionnaire suggested that further clarification was needed concerning the budgetary and performance evaluation processes. The issues related to determining the types of budgets prepared for foreign

Table 11. Cause for revision of forecasted exchange rates during a budget period

	Number	Response
	4	Forecast error
	28	Foreign exchange rate volatility
	15	Significant differences between budgeted and actual performance
	7	Other
Total	54	

subsidiaries, currencies used for budgeting and performance evaluation, accountability for variances, distinctions between hyperinflationary and non-hyperinflationary soft currency countries and the responsibility for translation and transaction gains (losses).

Regarding the budgetary process for foreign subsidiaries, 15 of 15 vice-presidents contacted in the February 1990 telephone survey indicated their firms prepared Income Statement budgets; 12 prepared Balance Sheet budgets, but three did not. All 15 indicated they prepared the same types of budgets for hard and soft currency countries. Several indicated that the Income Statement budget was more important for performance; that the Balance Sheet budget was used more for financial planning.

Thirteen of 15 interviewees indicated their firms used both the US dollar and local currencies for preparing foreign subsidiary budgets; two used the US dollar. For performance evaluation, eight indicated their firms used both the US dollar and the local currency; four the US dollar; and three the local currency.

As Jacque and Lorange (1984) have observed, highly turbulent environmental conditions, such as hyperinflation "exacerbate the intra. and inter-periodic volatility in the performance of foreign subsidiaries, as measured in reference currency terms." Failing to consider the impact of hyperinflation upon foreign subsidiary performance may result in unfavorable performance evaluation for managers in hyperinflationary soft currency countries compared to managers in non-hyperinflationary countries. Since hyperinflationary countries experience even greater currency volatility than soft currency countries generally, it is important to know whether US based MNCs budget for them in a special manner and evaluate their managers with a different yardstick.

Seven telephone interviewees indicated that their firms did distinguish between hyperinflationary and non-hyperinflationary soft currency countries in the budget setting process; eight did not. However, in the performance evaluation process, 10 of the 15 indicated their firm did distinguish between hyperinflationary and non-hyperinflationary soft currency countries.

If the interviewees indicated that their firms differentiated between hyperinflationary and non-hyperinflationary soft currency countries, either in budgeting or performance evaluation, they were asked if foreign subsidiary managers were held responsible for translation gains (losses) on the Balance Sheet, and transaction gains (losses) on the Income Statement in hyperinflationary countries or in non-hyperinflationary countries.

Regarding Balance Sheet translation gains (losses) in hyperinflationary countries, seven indicated the foreign subsidiary managers would be held accountable. However, in non-hyperinflationary countries, only one indicated foreign subsidiary managers would be held accountable for Balance Sheet translation gains (losses). Many interviewees indicated that under FASB 52, the use of the translation adjustment account minimized the impact of translation gains (losses) on the Income Statement when the local currency served as the functional currency. Hyperinflationary countries were governed by FASB 8 and several indicated their companies held foreign subsidiary managers responsible for translation gains (losses) which, under FASB 8, flow to the Income Statement. In these countries, the local subsidiary management was given wide latitude in hedging and the opinion was expressed that, since they were on the scene, they had better information about inflationary trends

and were in a better position to take hedging action to minimize its impact on translation gains (losses).

According to the notions of responsibility accounting it is not desirable to evaluate negatively managers whose performance was impacted adversely by events beyond their control, such as unforeseen, drastic currency fluctuations. A properly designed performance evaluation system would make allowances for the "uncontrollable" factors that result in a particular level of performance being achieved.[7] Thus, it might be reasonable to argue that subsidiary managers in hyperinflationary countries, who have little control over the underlying causes of translation and transaction gains (losses), should not be held accountable for them. However, a number of US parent corporations do not endorse this viewpoint. In these corporations, foreign subsidiary managers' familiarity with the local situation places responsibility in their hands for taking hedging action to minimize the impact of such losses; and they are held accountable for how successfully they do so. In fact, 10 interviewees indicated their firms would hold their foreign subsidiary managers responsible for transaction gains (losses) on the Income Statement in hyperinflationary countries, while only eight indicated they would do so in non-hyperinflationary countries.

As noted above, the use of one foreign exchange rate for budgeting and another for performance evaluation could result in variances. These could be volume variances or foreign exchange variances. All 15 interviewees indicated the foreign subsidiary manager would normally be held responsible for volume variances, unless there were uncontrollable outside factors. Regarding foreign exchange rate variances, eight indicated the US parent would be held accountable, two the subsidiary, two indicated the responsibility would be shared, and three indicated some other way of assessing responsibility, including "take exchange element out"; and "in P & L budgeting, foreign exchange gains (losses) not budgeted."

It appears that US based MNCs continue to rely heavily upon rather basic financial criteria, such as budgets and ROI, and that "environmentalized" control systems are not extensively developed, despite the heightened turbulence of the international monetary environment since the collapse of the Bretton Woods system (Jacque and Lorange, 1984). Thirteen of the 15 interviewees contacted by the authors indicated that performance against budget was the primary means used to evaluate foreign subsidiary performance. Nine of the 15 indicated that they evaluated foreign subsidiary management separately from foreign subsidiary budget performance. Various methods were employed, including achievement of non-budget goals, such as "opening new business, reducing non-performing assets"; "ROA and cash flow and 'line-fill', i.e., prompt filling of orders: 4/5ths of items ordered filled equals 80% line fill"; "market share"; "material uncontrollable factors are taken into consideration"; "return on assets, ROI, cash management"; "net income to dollar sales, return on sales, return on equity, inventory to sales, and outstanding receivables."

Conclusion

US based MNCs employ a variety of different exchange rates to prepare budgets and to evaluate foreign subsidiary management performance against budget. Both

the US dollar and the local currency are routinely employed. While most respondent firms indicated they use one foreign exchange rate for budgeting, and one for performance evaluation, several firms indicated they use more than one foreign exchange rate for each. The use of multiple rates could provide more meaningful relevant information for budgeting and performance evaluation. Larger firms may find this cost effective; smaller firms may not.

The results of our study indicate that many US based multinational corporations do differentiate between hard and soft currency environments, and between hyperinflationary and non-hyperinflationary soft currency countries, in determining exchange rates used for budgeting for foreign subsidiaries, and for evaluating foreign subsidiary management performance against budget. This provides evidence that many US MNCs do *not* determine budgets and evaluate performance in the same manner for subsidiaries in hard currency vs. soft currency countries. Among the soft currency countries, foreign subsidiary managers are given more responsibility for hedging in hyperinflationary environments. Local managers are assumed to possess better knowledge of inflationary pressures and, therefore, be in a better position to take hedging action.

A comparison of the foreign exchange rates used for budgeting cross-tabulated with foreign exchange rates used for performance evaluation in hard and soft currency countries indicates that US based MNCs often treat hard currency situations differently from soft currency ones. This implies that a number of US parent corporations are aware of the desirability of evaluating foreign subsidiary performance in soft currency countries differently from that in hard currency countries. The cross-tabulations suggest strongly that US based MNC respondents were less likely to employ combinations of foreign exchange rates for budgeting and performance evaluation which held foreign subsidiary management responsible for foreign currency exchange rate movements in soft currency countries than in hard, except in hyperinflationary countries. The US parent company seems to be more willing to assume the risks for currency exchange rate movements in soft currency countries, except in hyperinflationary countries, than in hard; they seem to be more inclined to share the risk with subsidiaries in hard currency environments.

Evaluation of foreign subsidiary management in different currency environments with the same yardstick does not always appear to be appropriate, particularly in those cases where foreign subsidiary management is less capable of exercising control. The results of this research study show that a number of US based MNCs do in fact employ different foreign exchange rates for budgeting and performance evaluation in hard and soft currency environments. The implications for morale and career advancement of foreign subsidiary managers cannot be overlooked. Foreign subsidiary managers are more prone to feel that their performance is evaluated fairly if the yardstick against which it is measured is appropriate for their particular circumstances.

Some foreign exchange rate combinations seem less well suited for evaluating foreign subsidiary performance than others. However, no one type of foreign exchange rate is universally appropriate for budgeting and/or performance evaluation for all multinational corporations. Industry and company characteristics vary significantly. What is appropriate for one company in one set of circumstances may not be appropriate for another in similar circumstances. This undoubtedly accounts for the

diversity found in practice, and for the disparity between what may be preferred theoretically and what is found in practice.

The present study is subject to certain limitations. The number of respondent firms is not as large as the researchers would have liked it to be. This is, in part, due to the number of firms, including some of the largest, which refused to participate as a matter of corporate policy. Thus, there is a possibility of self selection bias among the firms which elected to participate.

Appendix.

Coefficients of Exchange Rate Variation for Industrialized and Non–Industrialized Countries: First Quarter 1986 through Third Quarter 1989

Country group	Coefficients of variation	
	End of quarter national currency value of the SDR (percentage variation)	End for quarter average market exchange rates of national currency units per US dollar (percentage variation)
Industrialized		
Pegged to other composite		
Austria	4.094	9.642
Finland	3.070	8.343
Norway	2.070	5.691
Sweden	0.970	6.374
Cooperative arrangements		
Belgium	3.717	9.104
Denmark	3.688	8.860
France	2.784	7.444
Germany	4.250	9.792
Italy	8.938	7.394
Luxembourg	3.717	9.104
Netherlands	4.308	9.879
Spain	3.179	8.453
Independently floating		
Canada	5.585	6.401
Japan	5.639	11.057
U.K.	–	–
U.S.	5.751	–
Group means		
Industrialized Country Currency Values	4.117	8.395
Less industrialized		
Pegged to US dollar		
Afghanistan	5.751	–
Antigua & Barbuda	5.751	–
Bahamas	10.871	–
Barbados	5.751	–
Belize	5.751	–
Dijbouti	5.751	–

Appendix – continued

Country group	Coefficients of variation	
	End of quarter national currency value of the SDR (percentage variation)	End for quarter average market exchange rates of national currency units per US dollar (percentage variation)
Less industrialized continued		
Pegged to US dollar continued		
Dominica	5.751	–
El Salvador	5.751	–
Ethiopia	5.751	–
Grenada	5.751	–
Guatemala	19.074	23.996
Guyana	77.399	78.612
Haiti	5.751	–
Honduras	5.751	–
Liberia	5.751	–
Nicaragua	224.700	225.313
Oman	5.751	–
Panama	5.751	–
Peru	203.550	174.757
St Lucia	5.751	–
St Vincent	5.751	–
Suriname	5.751	–
Syrian Arab Rep.	53.400	51.417
Trinidad & Tobago	10.607	8.310
Uganda	86.897	87.478
Yemen Arab Republic	10.601	8.444
Pegged to French franc		
Benin	2.784	7.445
Burkina Faso	2.784	7.445
Cameroon	2.784	7.445
C.African Republic	2.784	7.445
Chad	2.784	7.445
Comoros	2.784	7.445
Congo	2.784	7.445
Cote d'Ivoire	2.784	7.445
Equatorial Guinea	2.784	7.445
Gabon	2.784	7.445
Mali	2.784	7.445
Niger	2.784	7.445
Senegal	2.784	7.445
Togo	2.784	7.445
Pegged to SDR		
Burundi	16.445	14.196
Iran	–	5.736
Myanmar	–	5.704
Rwanda	5.662	5.953
Seychelles	–	5.720
Pegged to other composite		
Algeria	22.684	21.551
Bangladesh	7.196	2.363
Fiji	16.180	12.238
Hungary	12.159	10.511
Iceland	17.567	17.233
Israel	12.036	10.216

Appendix – continued

Country group	Coefficients of variation	
	End of quarter national currency value of the SDR (percentage variation)	End for quarter average market exchange rates of national currency units per US dollar (percentage variation)
Less industrialized continued		
Pegged to other composite continued		
Kenya	12.890	10.267
Malawi	17.884	15.281
Malaysia	6.053	3.121
Mauritius	8.357	7.486
Nepal	12.461	10.166
Poland	89.944	90.260
Romania	2.848	7.521
Solomon Islands	13.169	10.154
Somalia	63.606	62.063
Tanzania	48.590	47.615
Thailand	4.209	1.602
Vanuatu	6.001	5.822
More flexibility – other managed floating		
Argentina	268.209	267.682
China P.R.	9.410	4.933
Costa Rica	18.254	14.888
Dominican Rep.	36.732	34.568
Ecuador	58.295	57.865
Egypt	5.751	–
Greene	8.956	8.448
India	12.606	10.594
Indonesia	15.901	12.526
Jamaica	6.185	2.018
Korea	9.099	10.754
Mauritania	6.805	5.198
Mexico	46.946	44.760
Morocco	1.324	4.669
Pakistan	10.794	8.256
Singapore	4.213	4.392
Sri Lanka	13.277	10.528
Tunisia	10.050	7.917
Yugoslavia	182.425	183.502
More flexibility – independently floating		
Bolivia	16.385	13.513
Gambia	6.398	6.762
Ghana	39.715	38.216
Lebanon	71.298	70.013
Maldives	15.221	11.513
Nigeria	48.566	48.098
Paraguay	45.323	45.198
Philippines	6.729	2.358
Uruguay	52.701	52.156
Venezuela	59.704	56.577
Zaire	67.389	67.561
Flexibility limited – single currency		
Qatar	5.751	–
Saudi Arabia	6.105	0.691

Appendix – continued

Country group	Coefficients of variation	
	End of quarter national currency value of the SDR (percentage variation)	End for quarter average market exchange rates of national currency units per US dollar (percentage variation)
Less industrialized continued		
Flexibility limited – single currency continued		
United Arab Emirates	5.751	–
More flexible – adjusted to set of indicators		
Brazil	187.972	189.116
Chili	15.741	12.207
Columbia	27.112	25.096
Madagascar	34.761	32.430
Portugal	5.589	5.828
Group mean less industrialized country currency values	26.680	25.113
Results of two tailed *t*–test of equality of means of industrialized and less industrialized country groups of SDR & US dollar value of foreign exchange rates	–4.728	–3.559
Significance level	0.0001	0.0006

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An Assessment of Voluntary Disclosure in the Annual Reports of Japanese Corporations

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Key words: Annual reports; Japanese corporations; voluntary disclosure

Abstract: *Outside Japan little is known of voluntary disclosure of information in the annual reports of Japanese companies and yet the country is a major world economic power, has the second largest stock exchange in the world, and has a unique environment. This paper reports on the impact of size, stock market listing, and industry type on voluntary disclosure in Japanese corporate annual reports. Using linear regression the single most important independent variable that helps explain variations in voluntary disclosure is size. Stock market listing was also found to be a significant predictor and manufacturing companies were found to disclose more voluntary information than other industry types.*

Japan is a country of interest because of its so-called unique environment which is emphasized in a considerable literature that is often referred to as the *nihonjinron* [literally, discussions of the Japanese].[1] Basic assumptions of the *nihonjinron* are that the Japanese are a culturally homogeneous racial entity that has remained unchanged from prehistoric times to the present, and that the nation differs radically from all others.[2] Japan is also a country of importance because it is a major economic power, has many multinational enterprises, some of which have overseas listings, and has a domestic stock exchange that has the second largest market capitalization in the world.[3] While an interest in Japanese accounting has developed over the last few years little empirical work has been undertaken on corporate financial reporting. This paper makes an early contribution to a more rigorous testing of Japanese financial reporting and specifically reports on the impact of size, stock market listing and industry type on voluntary disclosure in Japanese corporate annual reports.

Annual reports are one of the major mediums by which information is disseminated to external users. In Japan, the foundation of external financial reporting is the Commercial Code (CC), which was enacted in 1890 and substantially amended in 1899. While subsequent amendments introduced some important changes, the

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foundation of financial reporting before the First World War was the 1899 Act, which was (and still is) administered by the Ministry of Justice. Even today, all corporations in Japan must prepare a set of accounts which complies, at the very least, with the requirements of the CC.

The democratization program imposed by the United States on Japan at the end of the Second World War fundamentally changed the character of financial reporting. The CC was amended with increased emphasis on reporting to shareholders rather than creditors and, more significantly, the Securities and Exchange Law (SEL) was introduced. The Ministry of Finance administers the SEL which requires, among other things, information at regular intervals, not only through disclosures at the time of issuing securities by a registration statement but also by continuous disclosure. Disclosure required by the SEL, which applies to all corporations that have raised capital from the public, is orientated to general investors.[4] The majority of such companies have a quotation on at least one of Japan's stock exchanges. The SEL applies to approximately 3 000 corporations of a total of approximately 1,100,000 stock companies (kabushiki kaisha). Accounts prepared in accordance with the SEL are considered to be more detailed than the CC accounts although it is rare for the SEL accounts to be sent to shareholders. Copies of the SEL accounts, however, may be consulted at the company's head office, at the appropriate stock exchange or they may be purchased by the public from designated bookshops. The information disclosed in both the CC and the SEL accounts form part of the information set available to users. In addition, some listed corporations prepare a set of accounts in English which are not translations of either the CC or SEL accounts but are prepared on the basis of the company's perception of the needs of the international reader. Thus, it is possible that some information is disclosed in the English version accounts which may not be reported in the Japanese corporate reports. Again such disclosures form part of the information set which sophisticated users, at least, should assimilate. Thus, the corporate report information set varies from company to company depending, among other things, on the number of sets of accounts produced.

The purpose of this article is to examine the relationship between a number of firm-specific characteristics of Japanese companies, both listed and unlisted, and the extent of voluntary disclosure. Voluntary disclosure is defined as that which is not mandated where mandatory disclosure constitutes items that are specified by the CC and the SEL. Even the "Financial Accounting Standards for Business Enterprises" are considered to be voluntary in Japan. As Jinnai[5] has stated:

> The case of Nippon Steel is only one instance of the manipulative practice of accounting which is prevalent among Japanese companies. Although changing accounting policies to suit arbitrary financial objectives is theoretically against the "principle of consistency" which is stated in the "Financial Accounting Standards for Business Enterprises" as a general principle, there has been a continuous tendency in the practice of Japanese corporate financial accounting to change accounting policies frequently.

As a consequence, the definition of voluntary disclosure adopted here is very wide-ranging. The hypothesis to be tested is:

> There is an association between a number of firm-specific characteristics (namely size, listing status, and industry type) and the extent of voluntary disclosure in Japanese corporate annual reports.

For research work which has concentrated on disclosure in corporate annual reports see references 6–17 and in addition, work specifically on voluntary disclosure can

be found in references 18–24. This paper differs in a number of ways to those that have included Japanese corporations as part of their samples. First, research in this paper covers 48 Japanese corporations compared with much smaller samples elsewhere.[25–29] Second, previous research has concentrated on major listed corporations whereas this survey includes unlisted companies. Third, the research presented here covers disclosure in the CC, SEL and English version accounts whereas work by Campbell[30] was based solely on disclosure in the SEL accounts. In addition, since Japan is considered by many to have a unique environment, the results of research on other countries may not be relevant to that country.

The Impact of Firm-Specific Characteristics on Voluntary Disclosure Levels

Size

There are many reasons why large companies might disclose more information than other corporations and some of these relate to the need to raise capital at the lowest cost.[31] Large companies are likely to need substantial amounts of capital and corporations may increase disclosure to facilitate this. There is an obvious link here with quotation status since the need to raise capital may be one reason for obtaining a listing. For example, Choi[32] found that corporations wishing to obtain funds on the Eurobond market voluntarily increased disclosure upon entry.

Large companies are likely to be more complex since they are more likely to be multi-product based and operate in a number of geographical areas, including overseas. Such complexity may require more sophisticated management information systems to meet the needs for managerial control as well as the needs of financiers. Sophisticated systems, that can disclose an extensive array of information, require a range of skilled personnel and large firms are more able to obtain such skills.[33] Furthermore, large firms are likely to be entities of economic significance so that there may be greater demands on them to provide information for customers, suppliers and analysts, and governments as well as the general public.

Political costs may also be significant to large firms. For example, Stigler,[34] Peltzman,[35] and Jensen and Meckling[36] have suggested that some citizens may lobby elected officials for nationalization, expropriation or the breakup of the entity or industry. Political lobbying may also be undertaken to increase the extent of regulation in a particular industry. In response to these "political government intrusions, corporations employ a number of devices" to increase disclosure and minimize reported profits.[37]

Size can be measured in a number of different ways and there is no overriding theoretical reason to select one rather than another. However, one size variable may be applicable to a particular country but may not be relevant to another country. It is for this reason that three distinct size variables are used in this research, namely number of shareholders, total assets, and turnover. Because of the problem of multicollinearity between these variables three models are used with one size variable in each model.

Listing Status

In order to raise capital through the markets it is possible that listed companies will voluntarily disclose additional information. In addition, multiple listed corporations (those with a listing on the Tokyo Stock Exchange plus at least one overseas quotation) may disclose more information than those listed solely on the Tokyo Stock Exchange (TSE) because of the need to raise capital on international markets. Consequently, it is possible that multiple listed corporations will voluntarily disclose more information than those with a domestic listing only, which in turn may disclose more than unlisted firms. Such a finding would be consistent with work by Cooke[38] on a sample of Swedish corporations.

Agency theory suggests that the disclosure of information may vary with quotation status. Where there is a divorce of ownership from control the potential for agency costs exists because of conflicts between first, shareholders and managers, and second, between bondholders and shareholder-managers. The problem arises because of information assymetry between the principal and the agent. Since the principal will have difficulty in observing the behavior of the agents, it is possible that the agent may abuse the informational advantage. Monitoring problems may vary with quotation status since the principals of companies with many shareholders are likely to find the monitoring of agents more difficult than in corporations with a small number of shareholders. Disclosure in corporate annual reports is one way of reducing shareholders' monitoring costs.[39]

Industry Type

It is possible that disclosure in Japanese corporate reports may not be identical throughout sectors of the economy. For example, historical factors may be important in explaining differences in levels of disclosure. In addition, the existence of a dominant firm with a high level of disclosure in a particular industry may have a bandwagon effect on levels of disclosure adopted by other firms in the same industry. Indeed, Cooke,[40] using a sample of Swedish companies, found that corporations classified as "trading" had significantly lower levels of disclosure than companies classified into "conglomerate", "manufacturing", and "services" industry types. Stanga[41] also found industry type to be a significant explanatory variable.

Because of the small sample used here the corporations were classified into the four broad headings used by Cooke,[42] namely, conglomerate, manufacturing, services, and trading.

Research Methodology

The Annual Report Sample

This analysis covers the annual reports of unlisted and listed companies which prepared their financial statements in accordance with the CC, the SEL accounts that are prepared by listed corporations, and English version accounts when produced.

Table 1. Number of company accounts classified by quotation status

Groups	Type of company accounts		
	Commercial Code	Securities and Exchange Law	English versions
Unlisted	13	–	–
TSE	25	25	2
Multiple	10	10	7
Total	48	35	9

Information in all three sets of accounts forms part of the available information set. The corporate reports used were the latest available in June 1988. In order to obtain greater insight into the extent of disclosure the sample was categorized into three groups. First the unlisted group, second the TSE group (those listed on the Tokyo Stock Exchange), and a third group categorized as the multiple group (those corporations listed on the Tokyo Stock Exchange plus at least one overseas listing). A similar classification was undertaken by Cooke.[43]

In order to obtain the CC accounts, 200 Japanese corporations were contacted by letter (letters were sent in English and Japanese) . The companies were selected by simple random sampling without replacement from the population of listed and unlisted companies from the *Japan Company Handbooks*, publications which cover all listed and many major unlisted corporations. The overall response rate was 24%. While the rate of response may be considered low on an international basis, conversations with professional accountants in Japan (undertaken in the summer of 1988) revealed that the response rate was good for their country. This is because the Japanese are inherently secretive and corporations are generally unwilling to supply accounts to non-shareholders and show a strong resistance to financial disclosure *per se*.[44,45] A test that the non-respondents are distributed proportionately among the three groups revealed that there is no significant group bias and therefore the sample is soundly based.[46] The sample used is summarized in Table 1.

A major task was the selection of items of voluntary disclosure that might be included in Japanese corporate reports. The aim was not to identify voluntary disclosure to any one particular group but rather to adopt a wide- ranging approach that includes

Table 2. Distribution of items in the scoring sheet[50]

	Number of variables	%
Financial statements		
Balance sheet items	23	22
Income statement items	10	9
Other financial statements, e.g., value added	12	11
Measurement and valuation methods	27	26
Ratios, statistics and segmental information	16	15
Projections and budgetary disclosure	7	7
Social responsibility accounting	11	10
Total	106	100

disclosure to shareholders, potential investors, creditors, employees, the tax authorities and government because all these groups are considered to have an interest in the information set. The selection of items to be included in the disclosure scoring sheet was based on previous research studies, recommended disclosures by the IASC, and recommended disclosures by the Japanese Institute of Certified Public Accountants. Thus, the approach taken did not exclude items on the grounds of irrelevance to a particular user group[47] but was constrained by relevance to Japan[48] and by the exclusion of statutorily required items.[49] The total number of items included in the scoring sheet[50] is 106, distributed as shown in Table 2.

Scoring the Disclosure Items

One way of developing a scoring scheme to capture levels of disclosure is to cite the number of words used to describe an item. Such an approach was advocated by Copeland and Fredericks[51] and leads to a scale of disclosure which varies from zero to one. However, the allocation of scores along the continuum is rather subjective.

An alternative approach, which is adopted here, is to use a dichotomous procedure in which an item scores one if it is disclosed and zero if it is not disclosed. However, the approach taken here is not strictly dichotomous in that where an item is not relevant to a particular company the entity is not penalized for non-disclosure. For example, if an unlisted company does not have any subsidiaries it would be inappropriate to penalize the corporation for not producing consolidated accounts. Thus, the dichotomous procedure applies to those items considered relevant to that particular corporation based on judgment, after having read the entire contents of the corporate annual report. Failure to adopt such a procedure would have meant that larger more diversified enterprises would be able and likely to disclose more voluntary information. Such an approach was adopted by Buzby,[52] Wallace,[53] and Cooke.[54]

Disclosure of an item of information is assessed for each set of accounts. An item is considered to be disclosed if the information is contained in any of the corporate annual reports. The voluntary disclosure score (V) for a company is additive:

$$V = \sum_{i=1}^{m} d_i$$

where
$d = 1$ if the item d_i is disclosed
$= 0$ if the item d_i is not disclosed
$m \leq n = 106$ (discussed below)

This additive model is unweighted implying that each item is equally important. There is no doubt that one class of user will attach different weights to an item of disclosure than another class of user but an approach which tried to encapsulate the subjective weights of a multitude of user groups would be unwieldy and probably futile. Support for not attaching weights can be found in Robbins and Austin[55] and Cooke.[56]

Disclosure Indexes

Once all the items of information have been scored an index is created to measure the relative level of disclosure by a company. The index is a ratio of the actual scores awarded to a company to the scores which that company is expected to earn. The maximum score (M) a company can earn varies:

$$M = \sum_{i=1}^{n} d_i$$

d_1 = expected item of disclosure
n = the number of items which the company is expected to disclose, i.e. $n \leq 106$

The voluntary disclosure index for each company then becomes V / M.

Descriptive Statistics

Table 3 provides some descriptive statistics. It is noticeable that the mean of the unlisted group is lower than that of the TSE group which in turn is lower than the multiple listed group. The mean of the TSE group is in fact virtually the same as the mean for the whole sample. The standard deviation of the unlisted group is similar to that of the TSE group although the figure for the multiple listed group is somewhat higher. To test whether the means of the three groups are significantly different from each other, a one–way analysis of variance was undertaken. Table 4 shows the results of this test using the Scheffé multiple range test. Each of the three groups is significantly different from the others at the 0.05 level. To undertake one-way analysis of variance (and multiple linear regression – discussed later) the data must fulfill two conditions. First, the variances of all groups must be equal and second, each of the groups must be a random sample from a normal distribution. Both the Cochran's C and the Bartlett–Box F statistics reveal that the variances are homogeneous at the 0.05 significance level. Table 5 shows the t-tests for normality based on skewness and kurtosis. It is apparent that there are aspects of non-normality in the unlisted and TSE groups and the overall population. Nevertheless, the robustness of the test suggests that some differences do exist between the three groups.

Table 3. One–way analysis of variance: disclosure index scores by quotation status

	Groups			Total
	Unlisted	TSE	Multiple	
Number	13	25	10	48
Mean	0.077	0.166	0.286	0.167
Standard deviation	0.061	0.068	0.101	0.103
Standard error-mean	0.017	0.014	0.032	0.015
Kurtosis[a]	5.598	3.314	−1.315	−0.124
SE of Kurtosis	1.191	0.902	1.334	0.674
Skewness	2.232	1.509	−0.547	0.811
SE of Skewness	0.616	0.464	0.687	0.343
Minimum	0.01	0.07	0.14	0.01
Maximum	0.25	0.37	0.41	0.41

[a]Note that on SPSS[x] the kurtosis figure given is kurtosis minus three so that a z-score is simply kurtosis divided by the standard error of kurtosis.

Table 4. One-way analysis of variance: disclosure index scores by quotation status

Source	D.F.	Sum of squares	Mean squares	*F* ratio	*F* probability
Between groups	2	0.2487	0.1243	22.6078	0.0000
Within groups	45	0.2475	0.0055		
Total	47	0.4962			

Test for homogeneity of variance

Cochran's C = 0.5473, P = 0.058 (approx.)

Bartlett–Box F = 1.547, P = 0.213

Maximum variance/minimum variance ratio = 2.724

Multiple range test

Scheffé procedure ranges for the 0.050 level 3.58, 3.58

Significant differences

Groups	Groups: Unlisted	TSE
Unlisted		
TSE	*	
Multiple	*	*

* Denotes pairs of groups significantly different at the 0.05 level.

Table 5. *t*-tests for normality: skewness and kurtosis

	Groups Unlisted	TSE	Multiple	Total
Number	13	25	10	48
Skewness: *t*-test	3.623	3.252	–0.796	2.364
Kurtosis: *t*-test	4.700	3.674	–0.986	–0.184
Normal (N)/Non-normal (NN)	NN	NN	N	NN

Table 6. Correlation matrix of the size variables

	Turnover	No. of shareholders	Total assets
Turnover	1.00000	0.78556	0.95775
No. of shareholders	0.78556	1.00000	0.88906
Total assets	0.95775	0.88906	1.00000

Models

To test whether the extent of voluntary disclosure is determined by size, quotation status, and industry type a linear regression analysis was undertaken on SPSS^x. Size can be measured in a number of ways and multicolinearity can be a problem when undertaking linear regression. Table 5 shows the correlation between the size variables revealing that multicolinearity would be a problem if all three size variables were incorporated into the same model. Indeed, Moore and Buzby[57] made such a criticism of Singvi and Desai's[58] research. To control for the multicolinearity problem, three regression routines (referred to as models 1, 2 and 3) were run, thereby permitting a comparison of the adjusted R^2 figures.

Since listing status and industry type are categorical variables, dummy variables are used for each of these variables, omitting one arbitrarily from each category to avoid perfect colinearity, yields five explicit dummy variables. The equation is:

$$Y_i = ß_i + ß_2 X_{2i} + ß_3 X_{3i} + ß_4 X_{4i} + ß_5 X_{5i} + ß_6 X_{6i} + ß_7 X_{7i} + \varepsilon_i$$

where

Y = disclosure index scores
X_2 = size variables incorporated in alternative models:
(1) turnover
(2) number of shareholders
(3) total assets
X_3 = 1 if the company is unlisted
= 0 otherwise
X_4 = 1 if the company is listed on the TSE
= 0 otherwise
X_5 = 1 if the company is a manufacturing enterprise
= 0 otherwise
X_6 = 1 if the company is a trading enterprise
= 0 otherwise
X_7 = 1 if the company is a service enterprise
= 0 otherwise
ε = error term
i = the *i*th observation
ß = parameters

Results

Multiple Linear Regression

One way to specify correctly the regression model is to adopt a stepwise procedure which adds variables to the model to maximize R^2 or equivalently minimize the error sum of squares. If an independent variable does not meet the specified (here a 0.05 significance level) entry requirements the procedure is terminated. This approach is useful in determining those variables which should be included in the model, since the partial correlation between the predictor and the dependent variable provides information on the effect that a variable has on the independent variable after the effect of all previous variables included in the model have been eliminated.[59] One of the problems with an approach which maximizes R^2 is that the coefficient of determination increases as more variables are added to the model provided that those variables are not colinear with other independent variables and are correlated with the dependent variable. As a consequence, model specification is assessed on the basis of the adjusted R^2 ($\bar{R}^2$) measure of goodness of fit, since whilst R^2 may increase with the addition of variables, adjusted $\bar{R}^2$ may decrease because of the effect on the number of degrees of freedom.

Table 7. Summary of the step-wise regression routines

Model 1

Step–number	Variable entered	R^2	$\bar{R}^2$	F-ratio
1	Turnover	0.4068	0.3939	31.543
2	Unlisted	0.5583	0.5387	28.441
3	Manufacturing	0.6275	0.6021	24.707

Model 2

Step–number	Variable entered	R^2	$\bar{R}^2$	F-ratio
1	No. of shareholders	0.3931	0.3799	29.800
2	Multiple	0.5324	0.5117	25.622
3	Unlisted	0.6185	0.6461	23.782
4	Manufacturing	0.6762	0.6461	22.448

Model 3

Step–number	Variable entered	R^2	$\bar{R}^2$	F-ratio
1	Total assets	0.4082	0.3954	31.732
2	Unlisted	0.5497	0.5297	27.467
3	Manufacturing	0.6199	0.5939	23.915
4	TSE	0.6640	0.6328	21.248

A summary of the stepwise regression routine is shown in Table 7 and the final output of the stepwise regressions is shown in Table 8. Model 1 incorporates the size variable, turnover, at stage one. Further steps incorporate two dummy variables, the unlisted category, and the manufacturing industry type, into the regression equation. The fact that the beta coefficient for the unlisted group is negative denotes that disclosure by this group is significantly lower than the TSE and multiple listed groups. In contrast, the beta coefficient of the manufacturing group is positive showing that disclosure by this group is significantly higher than other industry types. The partial correlation coefficient between the predictor variable and the dependent variable, which is useful in deciding whether any of the variables left out of the equation should be incorporated into the regression equation, reveals that either the TSE group or the multiple listed group would be the next variable to be incorporated. The TSE group has a negative partial correlation coefficient (-0.270996) whereas the multiple listed group has a positive coefficient (0.270996). Consequently, both will have the same impact on $\bar{R}^2$. The Beta In statistic is the standardized regression coefficient that would result if the variable is entered at the next step. Since the beta of the unlisted group is negative, it is considered appropriate for interpretation purposes to test the effect on $\bar{R}^2$ if the TSE group is included (Beta In – 0.271840). The multiple listed group then acts as the implicit dummy variable (Beta In 0.220989). Both the TSE and multiple listed groups have been excluded from the regression at a 0.05 significance level (0.0718).

A number of alternative regression models were tested using the entered routine on SPSS^x (see Table 9). It is established that the equation with the highest $\bar{R}^2$ incorporates not only the variables included in the stepwise routine but also the TSE group ($\bar{R}^2$ increases from 0.60210 to 0.62275). The addition of any of the other industry types had the effect of increasing R^2 but decreasing $\bar{R}^2$ For example, the

Table 8. Final output of the step-wise regression routines

Model 1

Summary statistics

R^2	0.62750		
$\bar{R}^2$	0.60210		
F	24.70651		

Regressor	Coefficient	Standard error	P-value
Constant	0.120335	0.019357	0.0000
Turnover	5.10396E–08	1.0840E–08	0.0000
Unlisted	–0.093188	0.021788	0.0001
Manufacturing	0.062258	0.021779	0.0065

Model 2

Summary statistics

R^2	0.67618		
$\bar{R}^2$	0.64606		
F	22.44775		

Regressor	Coefficient	Standard error	P-value
Constant	0.111910	0.018500	0.0000
No. of shareholders	3.70866E–07	1.1143E–07	0.0018
Multiple	0.077846	0.024691	0.0029
Unlisted	–0.075247	0.021370	0.0010
Manufacturing	0.057144	0.020654	0.0083

Model 3

Summary statistics

R^2	0.66404		
$\bar{R}^2$	0.63279		
F	21.24824		

Regressor	Coefficient	Standard error	P-value
Constant	0.177625	0.030926	0.0000
Total assets	3.66728E–08	1.2142E–08	0.0042
Unlisted	–0.145711	0.031164	0.0000
Manufacturing	0.059008	0.020984	0.0074
TSE	–0.064744	0.027224	0.0219

addition of the services dummy variable increased R^2 to 0.65560 but decreased $\bar{R}^2$ to 0.61461. This is because of the effect on the number of degrees of freedom. Consequently, no further predictor variables were added to the equation.

Model 2 incorporates the number of shareholders as the predictor size variable. The stepwise regression routine shown in Table 8 (summarized in Table 7) shows that the number of shareholders was the first variable to be included in the equation. The addition of the multiple, unlisted and manufacturing variables has the effect of increasing $\bar{R}^2$ from 0.3799 to 0.6461. However, the entered regression routine gives the same $\bar{R}^2$ if the multiple listed group is an implicit dummy variable rather than an explicit dummy variable. For consistency with the other two models, the results of the entered regression routine which incorporates the TSE group is reported in Table 9. The variable with the highest partial correlation coefficient that is left out of the

Table 9. Final output of the entered regression routines

Model 1

Summary statistics

R^2	0.65485
$\bar{R}^2$	0.62275
F	20.39607

Regressor	Coefficient	SE coefficient	*P*-value
Constant	0.170799	0.033203	0.0000
TSE	−0.55324	0.029968	0.0718
Manufacturing	0.060386	0.021231	0.0068
Turnover	3.65655E−08	1.3148E−08	0.0080
Unlisted	−0.140537	0.033285	0.0001

Model 2

Summary statistics

R^2	0.67618
$\bar{R}^2$	0.64606
F	22.44775

Regressor	Coefficient	SE coefficient	*P*-value
Constant	0.189755	0.028367	0.0000
Manufacturing	0.057144	0.020654	0.0083
Unlisted	−0.153093	0.028944	0.0000
TSE	−0.077846	0.024691	0.0029
No. of shareholders	3.70866E−07	1.1143E−07	0.0018

Model 3

Summary statistics

R^2	0.66404
$\bar{R}^2$	0.63279
F	21.24824

Regressor	Coefficient	SE coefficient	*P*-value
Constant	0.177625	0.030926	0.0000
TSE	−0.064744	0.027224	0.0219
Manufacturing	0.059008	0.020984	0.0074
Total assets	3.66728E−08	1.2142E−08	0.0042
Unlisted	−0.145711	0.031164	0.0000

equation, using the stepwise procedure, is the services industry type. However, incorporation of this variable into the entered regression routine has the effect of increasing R^2 from 0.67618 to 0.67705 but the $\bar{R}^2$ decreases from 0.64606 to 0.63861. Consequently, the final model chosen does not incorporate the services industry type in the regression equation.

It is noticeable that the final model (3), as the previous two models, introduces the size variable at stage 1 giving an $\bar{R}^2$ on its own of 0.3954 using the stepwise procedure. With the addition of the unlisted, manufacturing and the TSE dummy variables the $\bar{R}^2$ increases to 0.6328. The variable with the highest partial correlation coefficient is the services industry type (0.026871). However, addition of this variable

has the effect of reducing $\bar{R}^2$ to 0.62432 in the entered regression routine. The final model chosen, therefore, excludes the services predictor variable (Table 9).

In undertaking the one-way analysis of variance a caveat was raised as to the presence of elements of non-normality. While this is an important caveat, a scatterplot of the residuals with the dependent variable does not provide evidence of heteroscedasticity.

Conclusions

This research has sought to investigate the impact of certain firm-specific characteristics on voluntary disclosure in Japanese corporate annual reports. Voluntary disclosure was assessed on the basis of information published in a company's Commercial Code accounts and for listed corporations its report prepared in accordance with the Securities and Exchange Law. In addition, if a corporation produced English version accounts these were considered to form part of the available information set. Forty-eight Japanese corporations were included in the sample and the relative level of disclosure was measured by an index calculated as the ratio of actual disclosure scores awarded to a company to the scores which that corporation may be expected to disclose. Actual scores were calculated from 106 items of information that were not required to be disclosed by Japanese law. The size of the sample means that the research should be considered to be a pilot study to more extensive analysis of Japanese corporate annual reports.

Using multiple linear regression this study has shown that the single most important independent variable that helps explain variations in voluntary disclosure in Japanese corporate annual reports is size. In all three models, using the stepwise procedure, size was incorporated into the regression equation at stage one. Total assets produced the highest F-ratio of the three size variables but only marginally higher than turnover. The number of shareholders was found to be significant but with a lower F-ratio than the other two size variables. Such a finding is consistent with work undertaken by Gray and Roberts[60] on voluntary information disclosure by British multinationals. In contrast, work by Cooke[61] established that quotation status was the dominant factor in explaining variability in voluntary disclosure by Swedish companies. Furthermore, Cooke[62] found that companies classified as trading corporations disclosed less information than other industry types. However, this research has found that it is manufacturing companies that voluntarily disclose more information than other industry types. Perhaps it is no coincidence that Japan's manufacturing base has been a major factor in the country's remarkable post-war growth record and its substantial balance of payments surplus. It is conceivable that reliance on overseas markets and to a much lesser extent for Japanese corporations, the raising of capital in international capital markets, is crucial in influencing levels of voluntary disclosure.

Listing status was also found to be a significant explanatory variable in all three models. The unlisted group disclosed less information than the TSE group which in turn disclosed less voluntary information than the multiple listed group.

All three models which maximized $\bar{R}^2$ incorporated the unlisted and TSE groups, the manufacturing industry type and the size variable. The regression equation that

included the number of shareholders as the measure of size produced the highest $\bar{R}^2$ followed by the equation that incorporated total assets as the size variable. The equation with the lowest $\bar{R}^2$ incorporated turnover as the measure of size.

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Financial Disclosures and Institutional Characteristics: Pension Reporting Differences Across Six Countries

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Key words: Pension reporting; International financial reporting practices; Institutional characteristics

Abstract: *This study examines the feasibility of enhancing financial statement comparability across countries. The International Accounting Standards Committee (IASC) in its Exposure Draft 32, "Comparability of Financial Statements," seeks to achieve such a result by reducing the free choice among accounting treatments. We address this issue by examining one reporting area, pension plans and retirement benefits. To analyze the application of Exposure Draft 32 to pension reporting, we study (1) the degree of reporting uniformity among public companies in six European countries, (2) selected institutional factors regarding pensions that may hinder the achievement of more reporting uniformity among these countries, and (3) the association of institutional characteristics with financial reporting differences. The degree of detail and stringency regarding national pension rules and laws represents a revealed signal of the social importance accorded to this sector by a particular country. The greater the level of importance, the higher would be the expected monitoring of compliance with these rules and laws. Financial reporting represents one mechanism by which monitoring takes place. Therefore, a strong positive association between institutional pension stringency and the extent of pension disclosures is hypothesized. Our results suggest that institutional constraints may not account for as much of the difference in financial reporting among countries as initially presumed.*

The International Accounting Standards Committee (IASC) in its Exposure Draft 32, "Comparability of Financial Statements," has set an objective, "the removal of free choices of accounting treatments presently permitted in International Accounting

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Standards" (Para. 3). The IASC's effort is designed to improve the comparability of financial information across international boundaries, an objective that is deemed to be "a necessary condition for the free flow of capital at its lowest costs to its most efficient users" (Para. 1).

To achieve this, the IASC has made 29 recommendations in Exposure Draft 32 affecting 13 International Accounting Standards (IAS); these recommendations are designed to reduce the number of free choices permitted in the accounting treatments of like transactions and events. The IASC states "Such free choices were necessary in the past to gain acceptance of certain standards" (Para. 3). Presumably, the IASC now feels that the climate for acceptance of certain limitations on reporting freedom has improved. The purpose of this paper is to study the practical feasibility of the IASC's efforts to reduce the free choice among accounting treatments, especially as it relates to institutional constraints, by examining one reporting area, pension plans and retirement benefits.

The area of pensions and retirement benefits is chosen for several reasons. First, retirement benefits represent a significant cost to most employers in most countries; second, several methods of accounting and reporting for retirement benefits exist; and third, the importance that societies attach to retirement security may influence the extent to which governments will carefully monitor and control many aspects of both public and private pension plans. The latter reason is important because a widely cited explanation for differences in financial reporting among countries is the effect of different institutional or environmental constraints on national financial reporting practices (see Cooke and Wallace (1980) for an extensive review of this literature). If this hypothesis is true, differences in these regulatory constraints should manifest themselves in pension reporting differences.

To analyze the applicability of Exposure Draft 32 to pension reporting, we study (1) the degree of pension reporting uniformity among public companies in six European countries; (2) selected institutional factors regarding pensions that differ across these countries; and (3) the association of institutional differences with financial reporting differences. Although we view this paper as a preliminary case study that begins to examine the Exposure Draft 32 goal of increasing comparability, it shows, subject to the limitations discussed later, that institutional constraints may not account for as much of the difference in financial reporting among countries as has initially been presumed.

The paper is divided into three sections. First, the reporting requirements for retirement benefits under IAS 19, "Accounting for Retirement Benefits in the Financial Statements of Employers," and the proposed reductions in the free choice for the reporting of retirement benefits under Exposure Draft 32 are summarized. (Some recommendations in Exposure Draft 32 apply uniquely to IAS 19.)

In the second section, the actual reporting practices for retirement benefits are examined for a sample of 82 companies from six European countries (France, Germany, the Netherlands, Sweden, Switzerland, and the United Kingdom). In the third section, selected institutional characteristics associated with retirement plans for these six countries are described and rated for regulatory stringency. We then introduce and explore the hypothesis which relates differences in institutional characteristics to differences in financial reporting. The hypothesis is tested at an

exploratory level by examining the association between regulatory stringency and our observed sample levels of disclosure. Association is measured using Spearman Rank Correlation analysis. We emphasize that this is a preliminary analysis designed to evoke more refined studies of this type. Consequently, our study possesses limitations, and these are also summarized in the third section.

Reporting Retirement Benefits

There are two principal types of retirement plans: defined benefit plans and defined contribution plans. IAS 19 allows two methods of accounting for the cost of retirement benefits under a defined benefit plan. These methods are the accrued benefit valuation method and the projected benefit valuation method. Both of these are actuarial methods. The pay-as-you-go and terminal funding methods are not allowed (Para. 45 (a)). The accrued benefit method reflects retirement benefits based on service rendered by employees as of the date of the actuarial valuation. The projected benefit valuation method reflects retirement benefits based on service both rendered and to be rendered by employees as of the date of the actuarial valuation. Since these two methods can produce significantly different results, Exposure Draft 32 attempts to limit this free choice of methods by stating "the cost of retirement benefits should be determined using an accrued benefit valuation method" (Para. 99). However, it does allow the projected benefit valuation method as an alternative treatment (Para. 45(a)).

IAS 19 also injects flexibility into both the accrued benefit valuation method and projected benefit valuation method by including the phrase "may incorporate assumptions regarding projected salary levels to date of retirement" in the definition of both methods (Para. 5) when in fact such assumptions should normally be made under the projected benefit method. Exposure Draft 32 eliminates this phrase in both definitions and inserts the following requirement for all defined benefit plans, "appropriate and compatible assumptions, including assumptions regarding projected salary levels to date of retirement, should be used in making the actual valuation" (Para. 104–105).

IAS 19 further states, "past service costs, experience adjustments, and the effects of changes in actuarial assumptions on retirement benefit costs should be charged to income as they arise or allocated systematically over a period not exceeding the expected remaining working lives of the participating employees" (Para. 45 (c)). Exposure Draft 32 eliminates this free choice by requiring that past service costs, experience adjustments and the effects of changes in actuarial assumptions on retirement benefit costs be allocated systematically over a period approximating the average remaining working lives of the participating employees (Para. 16).

Under defined contribution plans, no alternative accounting methods are allowed under IAS 19. In such plans, the employer's contribution to the retirement plan applicable to a particular accounting period should be charged against income of that period. In other words, the pay-as-you-go method is required.

The reporting and disclosure requirements for pension plans fall first under the general rubric of IAS 5, "Information To Be Disclosed in Financial Statements," which states that "all material information should be disclosed that is necessary to

make the financial statements clear and understandable" (Para. 06) and under general balance sheet disclosure, which requires that the methods of providing for pension and retirement plans be disclosed (Para 10). Also, under other liabilities and provisions, an example of significant items and of provisions and accruals that should be separately disclosed is the provision for pensions (Para. 16). No specific requirements for pension provisions are indicated under income statement disclosures (Para. 18).

IAS 19 requires more detail for pension disclosures, including the valuation method or methods used and any significant matters that affect comparability with the prior period. It also requires that if the amounts funded since the inception of the plan are different from the amounts charged to income over the same period, the amount of the resulting liability or deferred charge and the funding approach adopted be disclosed. In the case of a defined benefit plan, the amount of the shortfall (if any) of the net realizable value of the fund assets, together with the liability or deferred charge (if any), and a statement of the funding approach adopted should be disclosed. Also, in the case of a defined benefit plan, the date of the latest actuarial valuation should be disclosed (Para. 50).

Survey of Reporting Practices for Pension and Retirement Benefits

Data on pension and retirement benefits reporting practices were gathered by writing to approximately 200 large public companies in six European countries requesting a copy of their 1988 annual reports. The companies were chosen from the *Business Week* and *Forbes* listings of the largest world-wide companies outside the United States.

Annual reports from 82 companies were received. The number of companies in the countries sampled ranged from six in Switzerland to twenty in Germany. A wide variety of industries were represented with no industry dominating in any single country. For example, six different industries are represented by the six companies in Switzerland. Appendix B contains a list of companies and industries surveyed in this study. The content and diversity of reporting practices for pension and retirement benefits will be examined in two ways in this section. First, the comprehensiveness of disclosure of the accounting policies for pension and retirement benefits is studied. Second, we examine the frequency of reporting (1) monetary charges for retirement benefits in the income statement (or notes thereto) and (2) the monetary liabilities for retirement benefits in the balance sheet (or notes thereto).

As noted above, IAS 19 requires disclosure of the accounting policies adopted for pension plan costs, including the valuation method(s) used and any significant matters that affect comparability with the prior period. Table 1 contains the percentage of companies in total and by country that specifically report the accounting principles used to derive the pension accounting disclosures adopted by the company. From this data, we see that a majority (52.44 per cent) of the surveyed companies comply with IAS 19 and reported their choice of pension accounting principles; however, there is a wide variation among countries. For example, in France, the Netherlands and Germany, more than 70 per cent of these companies reported the pension

Table 1. Summary of accounting principles for pensions

	Total	France	Germany	Netherlands	Sweden	Switzerland	UK
No. of companies reporting	43	11	14	7	2	1	8
No. of companies studied	82	14	20	8	18	6	16
% reporting/studied	52.44%	78.57%	70.00%	87.50%	11.11%	16.67%	50.00%
Detail of disclosures by no. of companies reporting							
Pension liability is actuarially determined	26	5	11	4			6
Method/basis used (e.g., going concern method, entry-age method)	11	1	9	1			
Interest (discount) rate used in actuarial calculation	10		9		1		
Pension funds are adequate (or, pensions are adequately funded)	9		3	2			4
Contributions paid are charged to expense	8			2	1		4
Pension fund treatment by foreign companies	7	3	4				
Fund is administered by a third party (i.e. pension paid, net changes in commitments, etc.)	7	1		2			4
Employer and employee contributions are made	6	2			1		3
Additional benefits are provided by the company	3		3				
Assumptions used (i.e., length of service, life expectancy, etc.)	1	1					
Provision is determined/ stated on the basis of present value	1			1			
Provision relates to obligations not funded by third parties or separate funds	1			1			
Components of pension costs (i.e., pension paid, net changes in commitments, etc.)	1				1		
Capital gains on short-term investments are included in yield of fund	1				1		
If return is greater than pensions paid and changes in commitments, the cost may not be reduced below zero	1				1		
Provisions reflect companies with no independent pension funds	1					1	
Pension funds are based on the principle of capital coverage	1					1	
Pension funds are not considered	1					1	
Contribution equals cost	1						1

Note: Column totals do not reconcile because most companies report more than one item

accounting principles employed, whereas in Switzerland and Sweden less than 20 per cent reported this information.

Table 1 also indicates the nature of the disclosures regarding accounting principles for all companies in the sample and on a country by country basis. Of the 43 companies reporting pension information in a summary of significant accounting policies, only 26 companies (or 60 per cent) report that the pension liability is actuarially determined. Only in Germany (nine companies) does it appear to be common practice for the report to indicate the actuarial method or basis used and the interest or discount rate used in the actuarial calculation. But even here, the number of companies reporting this information represents less than half of the West German companies included in the sample. Nine companies of those reporting (or 21 per cent) in three countries (the Netherlands, the United Kingdom, and Germany) simply state that the pension funds are adequate or adequately funded. Eight companies of those reporting (or 19 per cent) in three countries (the Netherlands, Sweden, and the United Kingdom) use the pay-as-you-go method and charge contributions paid to expense. (Recall that this method is in direct violation of IAS 19 guidelines for defined benefit plans.) Various other provisions are reported by only one or a limited number of companies.

As noted earlier, IAS 19 requires the disclosure of the amount of the shortfall (if any) of the net realizable value of the fund assets, together with the liability or deferred charge (if any), but it does not require separate disclosure on the income statement of the periodic charge for retirement benefits. Table 2 shows the reporting of these monetary amounts by the surveyed companies in each country and in total. Our sample companies displayed a relatively high degree of overall compliance with the IAS 19 requirement for balance sheet disclosure. Seventy-three per cent of these companies report the monetary amount of the unfunded liability either in the balance sheet proper or in a note to the balance sheet. However, there is considerable variation when this statistic is examined on a country by country basis. For example, all of the West German companies and 83 per cent of the Swedish companies report the balance sheet amount, whereas only 33 per cent of the Swiss companies and 44 per cent of the United Kingdom companies report the amount. The percentages for the other countries fall in between.

As indicated in Table 2, the periodic income statement charge for retirement benefits is reported by 54 per cent of the companies in our sample. This is a relatively high level given the fact that such disclosure is not required by IAS 19, but as with the balance sheet disclosures, there is a considerable variation among countries. Three countries (Germany, the United Kingdom, and the Netherlands) have a high percentage of companies (100 per cent, 81 per cent, and 87.5 per cent, respectively) reporting this figure; but three countries (France, Sweden, and Switzerland) have very low percentages (7 per cent, 17 per cent, and 0 per cent, respectively). Thus, there is much variation among individual countries as to whether companies report balance sheet and income statement figures for pension plans. All German companies report both figures, but Swiss companies are unlikely to report either. The Netherlands is the only country, other than Germany, in which more than 50 percent of all companies report both figures. The United Kingdom is strong on income statement reporting, but somewhat weaker on balance sheet reporting. French and Swedish companies generally report balance sheet but not income statement figures.

Table 2. Monetary amounts reported (by country)

	Total companies studied	Income statement line item	Income statement note (expense)	I/S note or I/S line item***	Balance sheet line item	Balance sheet note (liability)	B/S note or B/S line
France							
No. of companies	14	0	1	1	2	10*	11
% of companies	100.00%	0	7.14%	7.14%	14.29%	71.43%	78.57%
Germany							
No. of companies	20	5	17	20	17	9**	20
% of companies	100.00%	25.00%	85.00%	100.00%	85.00%	50.00%	100.00%
Netherlands							
No. of companies	8	1	6	7	0	5	5
% of companies	100.00%	12.50%	75.00%	87.50%	0	62.50%	62.50%
Sweden							
No. of companies	18	0	3	3	13	11**	15
% of companies	100.00%	0	16.67%	16.67%	72.22%	66.67%	83.33%
Switzerland							
No. of companies	6	0	0	0	2	0	2
% of companies	100.00%	0	0	0	33.33%	0	33.33%
United Kingdom							
No. of companies	16	0	13	13	0	7	7
% of companies	100.00%	0	81.25%	81.25%	0	43.75%	43.75%
Total							
No. of companies reporting	82	6	40	44	34	42**	60
% of companies reporting	100.00%	7.32%	48.78%	53.66%	41.46%	51.22%	73.17%

* Company noted liability and expense
** Companies noted expense only, which is not included in this statistic
*** Column number does not equal total of prior two columns because some companies have both line items and note disclosures

In order to ensure that we were not, inadvertently, capturing irrelevant data in Tables 1 and 2, our study incorporated one additional feature. The auditor's opinion for each company was scrutinized to ascertain that the statements were, indeed, prepared in accordance with the generally accepted accounting principles of the country in which our sample company was domiciled. This protects against a situation that might arise insofar as, say, a Swedish company raises capital in the United States. In this situation, its disclosures must conform to US Securities and Exchange Commission rules. When companies do raise capital across national boundaries, there is a possibility that their reporting methods would be less responsive to institutional stringency within their own country. For all cases included in our sample, the companies' auditor's opinions indicated that the accounting principles utilized were those of the home country, rather than those of the country in which capital was raised.

In summary, these survey results show that overall only 52 per cent of the surveyed companies report accounting policies regarding pension and retirement plans and

the methods employed to measure the monetary amounts. Among those that do report these provisions, there is considerable diversity across countries in the percentage of reporting companies. Although disclosure of the monetary amounts associated with these plans is somewhat higher overall than policy disclosures (54 per cent for income statement amounts and 73 per cent for balance sheet amounts), the percentages vary greatly from country to country. In other words, some companies in some countries report pension accounting policies and some companies in some countries report monetary amounts. However, much remains to be accomplished in order to reduce disclosure and measurement differences, which is the objective of the IASC. The next section will explore the institutional differences among countries and relate them to the disclosure and measurement differences.

Institutional Differences Among Countries

One reason for the differences in the form and content of financial disclosures across countries may, in part, be attributable to various institutional characteristics, such as existing tax laws and other government regulations (see Pratt and Behr (1987) for a general discussion of this relationship). The IASC recognizes this constraint on achieving its comparability objectives: "In some countries, tax rules affect, among other things, the assignment of costs to inventories, depreciation, and the treatment of borrowing costs. As a result, they have hampered the efforts of the Board in eliminating some free choices of accounting treatment" (Para. 12). The IASC quotes a report of the Organization for Economic Cooperation and Development as suggesting that "tax considerations are a major obstacle to achieving greater comparability and harmonization of accounting practices" (Para 12). The IASC suggests that "in the longer term it is essential that the influence of national tax rules in determining financial reporting standards be reduced" (Para. 12). The effects of these institutional characteristics on reporting practices may be studied by examining reporting differences across a number of countries. This is the approach that this paper adopts. An understanding of the degree of association between institutional differences and financial reporting differences will provide a better understanding of the obstacles the IASC faces in achieving greater comparability.

The nature and form of pension and retirement plans, typically, are strongly affected by a country's institutional characteristics. This means that the pension area represents a potentially fertile place for exploring the association between institutional characteristics and financial reporting disclosures. The situation in the United States illustrates one country's institutional regulations and constraints regarding pensions. To ensure that US private pension plans are funded at specified minimum levels, the US Congress enacted the Employee Retirement Income Security Act (ERISA) in 1974. ERISA contains numerous funding guidelines and rules. In addition to these initial funding specifications, the US Congress also established the Pension Benefits Guaranty Corporation (PBGC), an agency which insures pension benefits in the event of termination of corporate pension plans. For taxation purposes, the US Internal Revenue Code identifies allowable actuarial methods, specifies in detail the deductible elements of pension funding and denies deductibility for

contributions to overfunded plans. Financial reporting rules are contained in FASB Statement No. 87, "Employers' Accounting for Pensions," one of the most complicated and detailed FASB statements in existence.

This paper presumes that government policy makers in countries other than the United States have a similar motivation to regulate and control numerous elements of private pension plans. (The existence of these governmental restrictions may explain why the IASC in Exposure Draft 32 allows the projected benefits actuarial

Table 3. Institutional characteristics (by country)

	France	Germany	Netherlands	Sweden	Switzerland	UK
A. Funding rules						
A.1 Specified by law?	Yes	No	Yes	Yes	Yes	No
A.2 Minimum funding requirements?	Yes	No	Yes	Yes	Yes	No
A.2A, 2B Basis for funding?	No	No	Yes	Yes	Yes	No
A.3 Prior service costs funding required?	No	N/A	Yes	*	No	N/A
A.4 Funding suspended if plan overfunded?	Yes	N/A	Yes	Yes	N/A	N/A
B. Taxation						
B.1 What amounts are tax deductible?	All	Change in actuarial liability	All proportional amounts	All contribution and insurance premiums	All	All
B.2 Upper limits on deductions?	No	Yes	Yes	Yes	No	Yes
B.3 Are any contributions non-deductible?	Yes, if below lower limit	Yes, if excessive contribution	Yes, if excessive contribution or fluctuations	Yes, but not used in practice	No	Yes, if not an approved plan
B.4 Nontaxable earnings on pension assets?	No	Yes	Yes	Yes	No	Yes
C. Financial reporting						
C.1 How is pension expense determined?	Pay-as-you-go	Actuarial	Actuarial	Actuarial	Pay-as-you-go	Actuarial
D. General						
D.1 Private or government plans dominate?	Private	Government	Private	Government	Private	Private
D.2 Defined benefit/ defined contribution?	Mostly defined benefit	Mostly defined benefit	Mostly defined benefit	Both are common	Mostly defined contribution	Mostly defined benefit

N/A, Not applicable
* Not available

method as an alternative to the accrued benefits actuarial method.) It seems apparent, as well, that the precise nature and extent of the scrutiny and control of pension plans will differ from country to country. Some countries may, for example, provide only broad guidelines for required pension funding while others might specify detailed minimum funding criteria tied to age, service cost, or other factors. The degree of detail and stringency regarding national pension rules and laws represents a revealed signal of the social importance accorded to this sector by a particular country. The greater the level of importance, the higher would be the expected monitoring of compliance with these rules and laws. Financial reporting represents one mechanism by which monitoring takes place. Therefore, a strong positive association between institutional pension stringency and the extent of pension disclosures is hypothesized.

To ascertain significant institutional characteristics relating to private pension plans in these six European countries, the cooperation of two international accounting firms was elicited. Appendix A contains the questionnaire which formed the basis for the data on national institutional characteristics. These questionnaires were completed by knowledgeable individuals in the European offices of each of the six countries represented in the sample. Two separate questionnaires for each country – one from each accounting firm – were obtained; this overlap was used as a mechanism to insure accuracy and to minimize erroneous responses that might be caused by misinterpretation of our questions.

The questions were designed to capture the degree of regulatory stringency imposed on private pension plans in each country. Consider question A.2 as an illustration. The existence of minimum funding requirements strongly indicates a higher degree of national pension scrutiny than a situation in which no minimum funding is required. Similarly, question D.1, regarding the relative importance of private plans, provides somewhat different evidence; the intuition is that the greater is the national importance of the private pension plans, the higher will be the degree of legal/regulatory scrutiny exerted.

The data in the completed questionnaires are summarized in Table 3 and were used to form a "regulatory stringency index" for each country. Each question was interpreted in isolation (except for questions A.2 a and b). A score of "+1" was assigned to answers reflecting regulatory stringency. A score of "–1" indicated an absence of such stringency. A score of "0" was applied to neutral responses.

Table 4 summarizes details of this scoring metric. (Other metrics for computing regulatory stringency, e.g., ordinal measures, were used and resulted in essentially identical rankings across countries.) From Table 4, it is apparent that some questions generated the full range of "+1" to "–1" while other questions, e.g., B.4, were assigned only "+1" and "0" scoring.

A comparison between the regulatory stringency indexes of Table 4 and the extent of company disclosure in Tables 1 and 2 reveals no clear relationships. As one example, Germany had the highest proportion of companies disclosing income statement and balance sheet monetary amounts (100 per cent); yet Germany (and the United Kingdom) had the lowest pension regulatory stringency score. Switzerland's regulatory score was also relatively low, and by contrast with Germany, our sample Swiss companies had among the lowest levels of pension disclosures on the items we sampled.

Table 4. Regulatory stringency ratings*

	France	Germany	Netherlands	Sweden	Switzerland	UK
A. Funding rules						
A.1 Specified by law?	+1	−1	+1	+1	+1	−1
A.2 Minimum funding requirements?	+1	−1	+1	+1	+1	−1
A.2A, 2B Basis for funding?	−1	−1	+1	+1	+1	−1
A.3 Prior service costs funding required?	−1	−1	+1	0	−1	−1
A.4 Funding suspended if plan overfunded?	0	−1	0	0	0	−1
B. Taxation						
B.1 What amounts are tax deductible?	0	+1	0	0	0	0
B.2 Upper limits on deductions?	−1	+1	+1	+1	−1	+1
B.3 Are any contributions nondeductible?	+1	+1	+1	+1	0	+1
B.4 Nontaxable earnings on pension reports?	+1	0	0	0	+1	0
C. Financial reporting						
C.1 How is pension expense determined?	−1	+1	+1	+1	−1	+1
D. General						
D.1 Private or government plans dominate?	+1	0	+1	0	+1	+1
D.2 Defined benefit/defined contribution?	+1	+1	+1	0	0	+1
Regulatory stringency index	+2	0	+9	+6	+2	0

* Scale is −1, 0, +1

The apparent lack of association based on visual inspection is reinforced when we compute the Spearman Rank Correlation coefficients between regulatory stringency and various measures of disclosure. The correlation coefficient between regulatory stringency rank and the accounting principles rank in Table 1 is only .1714 which is not significant at conventional confidence levels. The correlation coefficients between regulatory stringency and income statement (or note) and balance sheet (or note) disclosure were −.1429 and −.0286, respectively, which are also statistically insignificant. Thus, it is evident that there is very little relationship between the nature and extent of financial disclosures for pension firms in our sample and the regulatory stringency items we selected.

Conclusion and Limitations

In this paper we have studied the practical feasibility of the effort by the International Accounting Standards Committee (IASC) in its Exposure Draft 32, "Comparability of Financial Statements," to reduce the free choice among accounting treatments, especially as it relates to institutional constraints, by examining one reporting area, pension plans and retirement benefits. With regard to this subject,

we analyzed (1) the degree of reporting uniformity among public companies in six European countries, (2) selected institutional factors that may hinder the achievement of more reporting uniformity among these countries, and (3) the association of institutional characteristics with financial reporting differences. Our results show that, if none of the three other possible explanations listed below for the observed lack of association is valid, the influence of institutional characteristics on financial reporting may be smaller than previously thought. If true, then the results of our study may suggest that efforts to achieve comparability may be less constrained by national regulatory differences than was previously believed.

There are, of course, possible alternative explanations for this apparent lack of association. First, there is an obvious subjectivity in the items included in our institutional stringency questionnaires as well as in our scoring in Table 4. We may have failed to isolate the regulatory items that exert the greatest influence on pension disclosures. Alternatively, the items influencing disclosure may vary across countries. Additionally, our intuition regarding which characteristics indicated stringency, neutrality, or leniency may have been incorrect.

A second potential explanation for the lack of association may be that the specific institutional stringencies included in our questionnaire may not be the primary factors influencing levels of disclosure. To cite one example, the breadth of pension disclosure may be influenced more by the extent to which unions have achieved representation on directorship boards than on the Table 3 factors we surveyed.

Third, the disclosure items that we surveyed may have contributed to our lack of observed association. As one example, insofar as pension plans within a particular country tend to be fully funded, then there would be no liability to report on the balance sheet. In our study, this is interpreted as evidence of "substandard" disclosure; in fact, however, insofar as institutional forces mandate full funding, then the absence of a balance sheet disclosure constitutes evidence of an impact of regulation on financial statement numbers.

Appendix A. Pension Project Questionnaire

Please provide brief answers (one or two sentences) to each of the following questions as it relates to your country.

A. *Funding rules*

1. What is the law or act that specifies funding requirements? (for example, ERISA in the U.S.)
2. Are there minimum funding requirements? (for example, service costs in the U.S.) ____ Yes ____ No
   a. If yes, are they tied to service costs?
   b. If not, what are they tied to?
3. What are the funding requirements for prior service costs?
4. Are funding requirements suspended for overfunded plans?
   ____Yes ____No

B. *Taxation*

1. What pension amounts are deductible for tax purposes?
2. Is there an upper limit on deductible contributions?
   ____Yes ____No
   a. If yes, what is the upper limit?
3. Are there any types of pension contributions that are not tax deductible?
4. Are earnings on pension fund assets non-taxable?
   ____Yes ____No

C. *Financial reporting*

1. How is the amount charged to pension expense determined,
   pay-as-you-go _____ actuarial computation _____ other _____ ?

   Comment

D. *General questions by country*

1. Are private pension plans important or do government pensions dominate?
2. What is the approximate proportion of defined benefit to defined contribution plans?

E. *Please Complete*

Name of person completing questionnaire

____

Firm ____

Address ____

Telephone ____

Appendix B. Sample Companies

France	*Industry (or line of business)*
Carrefour	Retail: department/grocery stores
Chargeurs S.A.	Transportation and shipping/industrial products
Chargeurs Generale D'Elec (CGE)	Energy and transportation/electronics/ communications
Dumez	Construction/public works and distribution
Group Schneider	Electronic equipment/construction
LaFarge Coppee	Building materials/bioindustries
LVMH	Wine and spirits/leather goods
L'Air Liquide	Gas/pharmaceuticals
L'Oreal	Cosmetics
Matra	Aerospace/telecommunications/transportation
Pernod Ricard	Wine and spirits/nonalcoholic beverages
PSA	Automobile manufacturer
Thomson	Electronics manufacturer
Total CFP	Oil and gas

The Netherlands	*Industry (or line of business)*
ABN Bank	Banking
Akzo	Chemicals/healthcare/plastics
Amev	Insurance: Life and non-life
Amro Bank	Banking
Heineken	Beverages: wine, spirits, soft drinks
KLM	Airline
Nationale-Nederlanden	Insurance: life and non-life
Philips	Electronics/professional products and systems

Sweden	*Industry (or line of business)*
AGA	Gas/refrigeration/energy
Asea	Energy/engineering/shipping
Astra	Pharmaceuticals
Bilspedition	Shipping and transportation
Electrolux	Industrial and household products
Ericsson	Telecommunications
Nobel Industries	Adhesives/paint/defense systems/chemicals
Pharmacia	Biotechnology/therapeutics/opthalmics
Procordia	Food/tobacco/pharmaceuticals
Sandvik	Rock tools/steel
SCA	Healthcare/packaging
SE Bank Group	Banking
Skandia	Insurance: life and non-life
Skandia International	Insurance:life and non-life
Skanska AB	Construction/civil engineering

Stora	Packaging/building materials
Svenska Handelsbaken	Banking
Volvo	Automobile manufacturer
Switzerland	*Industry (or line of business)*
Electrowatt	Energy/construction/electronics
Jacob Suchard	Confectionery/beverages
Nestlè	Beverages/dairy/confectionery
Roche	Pharmaceuticals/fragrances
Swiss Air	Airline
Winterthur	Insurance: life and non-life
West Germany	*Industry (or line of business)*
AEG	Microelectronics/aerospace
Allianze AG	Insurance: life and non-life
BASF	Chemicals
Bayer	Industrial products/healthcare/polymers
Commerce Bank	Banking
Daimler-Benz	Automobile manufacturer/aerospace
Degussa	Metals/chemicals/pharmaceuticals
Deutsch Bank	Banking
Hoesch AG	Steel/industrial equipment
Hoescht	Chemicals
Linde	Gas/refrigeration/plant construction
MAN	Transportation/industrial engineering
Mannesmann	Machinery and plant construction/electrical engineering
Nixdorf	Microelectronics/software
Philipp Holzmann	International construction
Schering	Pharmaceuticals/agrochemicals/electroplating
Siemens	Microelectronics
Thyssen	Steel/trading and services/manufacturer capital goods
Viag	Energy/chemicals/aluminum
Volkswagen	Automobile manufacturer

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The Impact of New Accounting Rules on the Consolidation of Financial Statements of Multinational Companies

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Key words: Consolidated financial statements; Nonhomogeneity exception; Off-balance-sheet financing; Single currency; Foreign subsidiary.

Abstract: *The intent of consolidated financial statements is to provide meaningful, relevant, useful, and reliable financial information of a group of companies from an overall perspective. In compliance with the EEC and IASC standards as well as APB opinion No. 18 and ARB Nos. 43 and 51, multinational companies now prepare consolidated financial statements in a single currency. SFAS No. 94 was issued in October 1987 to improve the consistency of consolidated financial reporting and to standardize the consolidation process by eliminating the so-called "nonhomogeneity exception" used by MNCs to exclude certain subsidiaries from consolidated financial statements. The purpose of this study is to determine the impact of SFAS No. 94 on the consolidated financial statements of affected companies. Examination of the financial statements of 142 companies, mostly MNCs, reveals that: (1) the adoption of SFAS No. 94 had no material impact on consolidated net income or shareholders' equity; (2) SFAS No. 94 did significantly alter the structure and format of the basic financial statements; (3) the statement was a major step in resolving the growing problem of off-balance sheet financing; and (4) in most cases, the application of SFAS No. 94 encouraged MNCs to utilize the unclassified format presentation of financial statements currently used by banking and finance companies. The effective implementation of SFAS No. 94 requires the FASB to establish guidelines as to the structure and format of presenting consolidated financial information and calls for the EEC and IASC to reconsider and reformat their standards regarding MNCs' consolidation of financial statements.*

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Introduction

Consolidation of all majority-owned subsidiaries, including foreign subsidiaries, has been extensively, though inconclusively, debated in accounting literature. The intent of consolidated financial statements is to provide information of a group of entities from an overall perspective. Thus, the exclusion of foreign subsidiaries from consolidated financial statements conceals the actual economic status of multinational companies (MNCs). In October 1987, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 94, "Consolidation of all Majority-Owned Subsidiaries." SFAS No. 94 has eliminated the so-called "nonhomogeneity exception" which allowed majority-owned subsidiaries to use the equity method when their operations were substantially different from those of the parent or consolidated group. The nonhomogeneity exception had been used to exclude certain subsidiaries, such as finance, insurance, and foreign subsidiaries, from consolidated financial statements. The exclusion of these subsidiaries' liabilities, with the resulting reduction in debt-to-equity ratios, has been criticized as permitting "off-balance-sheet financing."

The nonconsolidation of certain subsidiaries not only raises the problems of comparability and credibility but it also permits improved financial ratios for the parent company. The FASB issued SFAS No. 94 to improve the comparability and credibility of financial reporting and to standardize the consolidation process. The Board also considered the Statement a major step in taking proper action on the growing problem of "off-balance-sheet financing." The purpose of this study is to examine the economic consequences and impact of SFAS No. 94 on the consolidated financial statements of affected companies.

Accounting Pronouncements Related to Consolidated Financial Statements

Prior to the issuance of SFAS No. 94, consolidated financial statements in the United States were prepared based on the provisions of Accounting Research Bulletin (ARB) No. 51, "Consolidated Financial Statements," and to a lesser extent Accounting Principles Board (APB) Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock," as well as ARB No. 43, Chapter 12, "Foreign Operations and Foreign Exchange." These official pronouncements established the requirements and guidelines for consolidated financial statements but permitted some exceptions to the general rule. In compliance with the above pronouncements, companies could exclude certain majority-owned subsidiaries from consolidation. The excluded subsidiaries were considered to be nonhomogeneous operations, such as finance, insurance, real estate, and leasing subsidiaries, of nonfinancial parents. By requiring the consolidation of all subsidiaries, SFAS No. 94 is a major step in providing uniformity in practice and resolving the problem of "off-balance-sheet financing."

During the past two decades, the preparation of consolidated financial statements has become the norm for MNCs. In 1976, the European Economic Community

(EEC) issued a proposed "directive" that requires the annual publication of consolidated financial statements in order to achieve uniform legal requirements in all member countries[1] (See McLean, 1976). The International Accounting Standards Committee (IASC), also in 1976, issued a formal standard on the subject of consolidated financial statements. The IASC requires the following pertaining to the consolidation of financial statements MNCs:

A parent company should issue consolidated financial statements, except that it need not do so when it is a wholly-owned subsidiary. A subsidiary should be excluded from consolidation if: (a) control is temporary, or (b) the subsidiary operates under conditions in which severe long-term restrictions on the transfer of funds impair control by the parent company over the subsidiary's assets and operation.

According to the above pronouncement, foreign subsidiaries are commonly excluded from consolidation in circumstances where: (1) the ability of the parent company to control the financial activities of the foreign subsidiary is limited;[2] (2) the foreign subsidiary's business activities are so dissimilar to those of the parent that combined financial statements would not be meaningful; (3) the impracticality of consolidation or the insignificance of foreign financial statements in terms of amounts involved; (4) the possibility of disproportionate expense or delay in preparing consolidated financial statements; and (5) the judgment and opinion of the management of the MNCs that the impact of consolidation would be misleading or harmful to the parent's business. In summary, the decision to consolidate foreign subsidiaries' financial statements should be evaluated in terms of: (1) the importance and significance of the degree of consolidation to worldwide interested uses of consolidated financial statements; and (2) the relevance and meaningfulness of consolidated financial statements prepared in a single currency.

SFAS No. 94 amended ARB No. 51, the EEC Directives, and the IASC Standards by requiring the consolidation of all majority-owned subsidiaries unless control is temporary or does not rest with the parent. Furthermore, SFAS No. 94 states that consolidations must be complied with even if a majority-owned subsidiary has "nonhomogeneous" operations, a large minority interest, or a foreign location. The statement also amended APB Opinion No. 18 by eliminating the use of the equity method for all unconsolidated subsidiaries. Indeed, the Statement virtually requires all unconsolidated subsidiaries to use the cost method of accounting for equity investments. In addition, information on assets, liabilities, and results of operations for formerly unconsolidated majority-owned subsidiaries should continue to be disclosed either individually or in groups in consolidated financial statements or footnotes.

Major Reasons for the Issuance of SFAS No. 94

The Statement was issued to improve the comparability and consistency of financial reporting by standardizing the consolidation process. Prior to SFAS No. 94, the practice of consolidation varied across and within different industries and countries. The major reasons for the issuance of SFAS No. 94 can be attributed to two factors: (1) the diversity and complexity of business environments; and (2) the existence of "off-balance-sheet financing" concerns.

Diversity and Complexity of Business Environments

The structure of business and industry within the United States and abroad has changed significantly during the past two decades. International business activities have grown to such an extent that the majority of corporations in the United States are involved in a number of foreign operations. MNCs are becoming more and more diversified, and reporting under ARB No. 51 and IASC Standards has become less consistent. There was a gap between firms that consolidated all majority-owned subsidiaries and ones that only consolidated homogeneous operations. The users of financial statements of MNCs have realized that without consolidation companies can conceal losses in unconsolidated subsidiaries or may attempt to exclude unprofitable foreign subsidiaries from consolidation by using the nonhomogeneity rule. The Statement was issued because the business environment has significantly changed and has become increasingly complex since previous pronouncements.

Some companies took advantage of the ambiguous "nonhomogeneity" rule under ARB No. 51 and excluded some of their majority-owned subsidiaries from consolidated reports. They have branched into different lines of business, such as financing, insurance, real estate, leasing, and investment banking. While they remain primarily nonfinancial enterprises, they have formed separate subsidiaries to conduct financial activities that were formerly conducted by the parents or their existing subsidiaries. This practice allowed companies to derive benefits from their controlling interests, yet exclude the obligations of these captive finance companies from their consolidated balance sheets. Sometimes, these subsidiaries become so huge that not including them would cause incomplete and inaccurate presentation of consolidated financial statements.

The growing diversity in consolidation/nonconsolidation practice prevents a comparability between companies' financial statements. The Board reached the conclusion that the diverse nature of business between the parent and its subsidiaries is an insufficient reason for excluding them from consolidation. The FASB indicates that the concept of control is being reconsidered and, accordingly, consolidation decisions should be based on the control of operating and financial policies rather than on ownership of a majority voting interest. SFAS No. 94 allows investors, creditors and other users of financial statements to assess better both similarities and differences in enterprises. This concept of comparability is particularly important in reporting consolidated cash flows. Although the equity method and consolidation may report the same net income, they do not report the same cash receipts and payments relating to operations, investing, and financing activities. Important information as to how an enterprise generates cash through operations, as well as information about its investing and financing activities, is not provided if subsidiaries are not consolidated.

The Off-Balance-Sheet Financing Dilemma

The term "off-balance-sheet financing" is commonly used to describe the understatement or nonreporting of debt on the balance sheet in order to improve certain balance sheet ratios. This omission or understatement of debt is called off-balance-sheet financing because it is the funding or refinancing of a portion or all of

an entity's operations in such a way that some or all of the financing is not required to be reflected on the balance sheet prepared in conformity with the Generally Accepted Accounting Principles (GAAP).

Companies are strongly motivated to keep obligations off their balance sheets because they can do so and still accomplish their operating and financing objectives at little or no additional cost. They can also improve their debt-to-equity ratios and, accordingly, increase their borrowing capacity and lower their borrowing costs. For years, MNCs have used the permissive authoritative literature of ARB No. 51 and IASC Standards to exclude certain majority-owned subsidiaries from consolidation. This type of off-balance sheet financing obviously can cause the parent's financial statements to appear healthier than otherwise would be the case. The problem is even more serious when these unconsolidated subsidiaries grow to become huge relative to the primary business, so that not including them could be an inaccurate portrayal of reality. The exclusion of foreign subsidiaries from consolidated financial statements especially would conceal the economic status of MNCs.

Financial Statement Effects of SFAS No. 94

The impact of SFAS No. 94 depends on the nature and magnitude of unconsolidated subsidiaries' operations prior to the adoption of SFAS No. 94 and the companies' consolidation policies. If a particular firm were near compliance with SFAS No. 94, then the impact should be minimal. Prior to SFAS 94, a variety of consolidation policies were used. Some companies reported a full set of financial data for the subsidiary including footnotes. Others presented just one-line disclosures of total assets and total owners' equity. While some companies reported classified consolidated financial statements, others simply showed intercompany receivables/payables as elements of the subsidiary's assets/liabilities, combined as part of subsidiary owners' equity. The consolidation information was variously reported in either the consolidation policies, management's discussion of operations, or the footnotes of the subsidiaries. In general, the quality of subsidiary accounting disclosures varies considerably across MNCs. Thus, the diversity of consolidation policies and practices as well as the incompleteness and unevenness of the footnotes disclosures should determine the extent and incidence of the impact of SFAS No. 94.

Most finance subsidiaries were wholly-owned and highly leveraged, and by not consolidating them, the reported financial statements could appear healthier. Livnat and Sondhi (1989) argued that one reason management establishes financing subsidiaries is to exclude subsidiary debt from the consolidated balance sheet and cause debt covenants to be less binding. The empirical evidence indicated that the formation of an unconsolidated finance subsidiary not only improves key financial ratios, but also reduces variability in the consolidated balance sheet. For example, when receivables are transferred to the unconsolidated finance subsidiary, the parent's cash position may improve because some of these receivables may not be collected for several years. Thus, by forming a finance subsidiary and not consolidating its activities, the parent's liquidity position would be enhanced.

Previous studies (see Anthony and Elfrink, 1989; Rue and Tosh, 1987; Hylton, 1988; and Heian and Thies, 1989) in this area either compared leveraged ratios including financing subsidiaries with the same ratios without subsidiaries or examined average debt ratios before and after pro forma consolidation and concluded that the average debt-to-equity ratio increased in some cases up to 90 per cent. Prior researchers and some early reaction to SFAS No. 94 predicted the negative impact on the structure of the balance sheet and the key financial ratios. Since a substantial number of companies have already adopted SFAS No. 94, it should now be possible to determine the accuracy of those predictions and to assess economic consequences of the Statement. This study examines the economic consequences and financial statement impact of SFAS No. 94 by comparing the reported consolidated financial information with the restated information in the same year.

Based on the preceding discussion, the following hypotheses were formulated:

H–1: Earnings change: adoption of SFAS No. 94 had no material impact on consolidated net income or stockholders' equity.

H-2: Debt-to-equity ratio: consolidated financial statements show higher debt-to-equity ratios due to the implementation of SFAS No. 94.

H-3: Current ratio: the short term liquidity of companies has improved as a result of adopting SFAS No. 94.

H-4: Diversity in practice: the Statement did not eliminate the diversity in practice of consolidated financial statements, instead it encouraged unclassified format presentation of financial statements.

Data Collection

The empirical data presented in this paper are compiled from public companies that adopted SFAS No. 94 in their fiscal years 1987 and 1988. National Automated Accounting Research System (NAARS) was utilized to collect the required financial data. NAARS contains around 4000 annual reports. Each file in the system for annual reports of nonfinancial parents with their finance subsidiaries was screened and 187 companies with consolidated financial statements were identified. Furthermore, the footnotes to the financial statements of these companies were searched for supplementary disclosures of the assets, liabilities, and revenues of their finance subsidiaries prior to the year of adoption. Forty-five companies (24 per cent) presented no supplementary disclosures of subsidiaries operations. Therefore, they were excluded from the sample.

For the 142 selected companies, consolidated financial data were drawn from the COMPUSTAT data base when available and from annual reports, 10K reports, and other sources when necessary. This data base was then examined to determine the economic consequences and financial impact of SFAS No. 94 on selected companies. The FASB requires companies to adopt the Statement retroactively by restating prior years' consolidated financial statements. To isolate the effects of other pronouncements (e.g., other accounting rules and changes), financial data of the

year prior to adoption were compared with the restated financial data of the same year adjusted to comply with the provisions of SFAS No. 94. For example, for those companies that adopted SFAS No. 94 in 1988 (97 per cent of the studied companies), the reported financial statements of the fiscal year 1987 were compared with restated financial statements of the same year. This comparison helps to isolate confounding events (the effects of other accounting rules) from the analysis and to concentrate specifically on the impacts of the provisions of SFAS No. 94 on financial statements of studied companies.

Companies Studied and their Attributes

The 142 companies utilized in this study were broadly distributed across 35 industry groups.[3] These companies then were classified in five general industry groups. Table 1 presents the distribution of companies among the five general industry groups. More than 65 per cent of these companies were concentrated in the manufacturing industry. This group consists of companies in the chemicals, petroleum refining, machinery, transportation equipment, instruments, and other manufacturing industries. The wholesale and retail trade group represents 15 per cent of the sample and consists of wholesale trade, general merchandise stores and other retail trade. The other three industry groups represent 20 per cent of the sample and include transportation, communication, electronic and gas services, business services, and other industries.

Table 1 also reveals that only 4 companies (3 per cent) adopted SFAS No. 94 early in 1987. The remaining companies adopted the Statement in 1988 as was required by the FASB. Perhaps one reason for not adopting the Statement early was because of the expectation of its negative impacts on consolidated financial statements.

Empirical Results

Analysis and comparison of the reported financial data with restated financial data of the year prior to the adoption of SFAS No. 94 indicate that many elements of financial statements of a majority of studied companies are affected significantly. Part A of Table 2 presents the impact of SFAS No. 94 on companies' total assets. A

Table 1. Distribution of studied firms across industry and the year of adoption of SFAS No. 94

Industry group	Year of adoption 1987	Year of adoption 1988	Number of firms	%
Manufacturing	2	90	92	65
Transport, communication, electric & gas services	0	11	11	8
Wholesales and Retail	1	21	22	15
Services	0	6	6	4
Other industries (4 groups)	1	10	11	8
Totals	4	38	142	100

Table 2. Impact of SFAS No. 94 on total assets and sales of firms across industry groups (millions of dollars)

	Part A: Comparison of total assets (reported vs. restated) of the year before adoption			Part B: Comparison of sales (reported vs. restated) of the year before adoption		
Industry group	Average total assets as reported ($)	Average total assets restated ($)	Percentage increase	Average sales as reported ($)	Average sales restated ($)	Percentage increase
Manufacturing	65,370	69,960	7	48,204	49,168	2
Transport.,Communications, Electric & Gas Services	25,821	29,694	15	17,816	18,350	3
Wholesale & Retail	3,210	4,237	32	2,728	3,125	14
Services	584	649	11	513	554	8
Other Industries (4 groups)	8,310	9,805	18	5,152	5,409	5
All 142 firms	14,823	16,157	9	12,682	13,190	4

comparison of reported total assets with restated total assets reveals that on average total assets increased by 9 per cent. The highest percentage of increase was 32 per cent for the wholesale and retail trade industry group and the lowest was 7 per cent for the manufacturing industry. Comparison of reported sales with restated sales of companies across industry for the year before adoption is presented in Part B of Table 2. On average, total sales increased less than 4 per cent after including nonhomogeneous subsidiaries in consolidated financial statements. The highest percentage of increase in sales was for the wholesale and retail trade industry (14 per cent) and the lowest was for the manufacturing industry (2 per cent). The empirical results presented in Table 2 indicate that the purpose of creating many of the financing and leasing subsidiaries was not to generate more revenues through them, rather a majority of parent companies might have used those subsidiaries for an off-balance-sheet financing purpose of excluding subsidiaries debts from the consolidated balance sheets.

Table 3 reports the impact of SFAS No. 94 on the debt-to-equity ratio of the 142 companies by industries. The average ratio of debt-to-equity increased 71 per cent from 0.63 as reported to 1.08 as restated to comply with the provisions of SFAS No. 94. The percentage increase in the debt-to-equity ratio varied significantly by industry. While the highest percentage of increase was 153 per cent for the service industry, the average debt-to-equity ratio for the manufacturing industry increased by 83 per cent. For many companies within the industry, the average debt-to-equity ratio increased substantially above the average for the industry. For example, the debt-to-equity ratio for Ford Motor Company and General Motors more than doubled. Some individual industries' change in this ratio shows a phenomenal increase. For example, the lumber and wood products industry, which is classified as "other industries" in Table 3, had almost a 300 per cent increase in the average debt-to-equity ratio.

The empirical results presented in Table 3 show the extent to which large firms were taking advantage of off-balance-sheet financing. Since SFAS No. 94 requires companies to include all their debts in the consolidated financial statements, management may attempt to reduce long term debt in the future. Many affected companies may incur additional costs for renegotiating existing debt covenants to adjust for the effect of the substantial increase in the debt-to-equity ratio. In response to the negative impact of SFAS No. 94 on debt-to-equity ratios and the probability

Table 3. Average debt-to-equity ratio by industry

Industry group	Debt-to-equity as reported	Debt-to-equity restated	Percentage increase
Manufacturing	0.52	0.95	83
Transport, communications electric & gas services	1.12	1.48	33
Wholesale & retail	0.75	1.09	45
Services	0.65	1.65	153
Other industries (4 groups)	1.31	3.23	146
All 142 firms	0.63	1.08	71

Table 4. Average current ratio by industry

Industry group	Current ratio as reported	Current ratio restated	Percentage increase
Manufacturing	1.42	1.52	7
Transport, communication, electric & gas services	1.12	1.23	10
Wholesale & retail	.93	.98	5
Services	.85	.87	2
Other industries (4 groups)	2.18	2.68	23
Total 142 firms	1.38	1.46	6

of violating debt covenants based upon these ratios, the affected companies may react in one or more of the following ways: (1) go private to avoid the public reporting and consolidation requirements of SFAS No. 94; (2) change their corporate structure by creating holding companies to mitigate the restrictions of issuing new long-term debt caused by the adoption of SFAS No. 94;[4] or (3) incur the additional cost of renegotiating debt covenants.

Table 4 shows the results of comparing the current ratio as reported with the ratio restated for 142 companies across five industry groups. By including both assets and liabilities of nonhomogeneous subsidiaries in consolidated financial statements, both current assets and current liabilities increased and the current ratio for all 142 firms showed a 6 per cent increase. The highest percentage of increase was 23 per cent for the other industries group and the lowest was 2 per cent for the services industry group. This minor increase in the current ratio indicates that creating a finance subsidiary and consolidating its activities can improve short-term liquidity and relieve a parent company's financial statement of financing its own receivables. However, the parent company and its subsidiaries are separate legal entities and the assets of the parent company cannot be used to pay the liabilities of the subsidiary without in turn creating a liability for the subsidiary company. Thus, little value should be placed on liquidity ratios of consolidated financial statements, especially when the companies operate worldwide and in divergent fields.

Table 5. Impact of SFAS No. 94 on the structure of financial statements by industry

Industry group	Classified		Unclassified		Classified/ unclassified		Total	
	#	%	#	%	#	%	#	%
Manufacturing	13	14	48	52	31	33	92	65
Transport, communications, electric & gas services	6	55	3	27	2	18	11	8
Wholesale & retail	15	68	2	9	5	23	22	15
Services	1	16	3	50	2	34	6	4
Other industries (4 groups)	5	45	6	55	0	0	11	8
Totals	40	28	62	44	40	28	142	100

The purpose of consolidated financial statements is to present the financial position and results of operations of the parent company and its subsidiaries "as if" they were a single economic unit. Assuming that the parent company is able to control the decision-making processes and resources of the subsidiary, then a single economic unit may exist. However, this does not imply that the economic entity is also a legal entity. The users of consolidated financial statements should be aware of the above distinction. It does not necessarily mean that consolidated assets are potentially available to satisfy the claim of all consolidated outside creditors. Typically, the controlling parent decides to what degree it will assume its subsidiary's obligations.

The empirical results presented in Table 5 reveal that SFAS No. 94 encouraged the unclassified presentation of consolidated financial statements and also re-emphasized the need for disaggregated information. A majority of companies had difficulties consolidating unclassified financial statements used by a wholly-owned financing subsidiary with classified financial statements of the parent manufacturing or merchandising company. While on average more than 70 per cent of the studied companies used either an unclassified or classified format, only less than 15 per cent of companies in the manufacturing industry group prepared classified consolidated financial statements. Before the adoption of SFAS No. 94, almost all of the companies studied prepared classified consolidated financial statements along with proper footnotes, making disclosures of activities of nonhomogeneous subsidiaries. After the adoption of SFAS No. 94, 44 per cent of companies changed from a classified format to an unclassified format and 28 per cent from a classified to a classified/unclassified structure. For example, Ford Motor Company presented the assets and liabilities of its financing subsidiaries in a separate section in the balance sheet following the assets and liabilities of the parent and other subsidiaries.

The primary objective of consolidation is to condense financial data into a single set of financial statements to provide meaningful, relevant, useful, and reliable financial information to interested users of consolidated financial statements. The question is, did SFAS No. 94 help in providing a set of useful and relevant consolidated financial information. On one hand, advocates (see Anthony and Elfrink, 1989; Rue and Tosh, 1987; and Hylton, 1988) argued that the Statement provides disclosure of previously undisclosed financial data of unconsolidated entities. They stated that consolidated financial statements are prepared based on the assumption that combined financial statements provide more relevant, meaningful, and useful financial information than separate financial statements of the parent and its subsidiaries. On the other hand, opponents (see Heian and Thies, 1989) viewed SFAS No. 94 unfavorably because major operations of highly diversified companies are so heterogeneous that combining the assets and liabilities may provide meaningless financial disclosures. The major criticism of SFAS No. 94 is that companies may have to combine "apples with oranges" as a result of compliance with the provisions of the Statement.

The question how to report consolidated financial statements became more important as a result of the issuance of SFAS No. 94. The Board did not provide any guidance regarding the format presentation of consolidated financial statements and left affected companies to develop their own reporting format. The author can testify, after reading more than 200 consolidated financial statements, that the vast majority of users of financial statements will find the consolidated information very confusing

and not useful at all. In addition, management may be motivated to present unclassified financial statements in order to bury perceived negative financial impacts of SFAS No. 94. Unclassified format practices have raised more questions as to management's motivation than the need for stricter guidelines and, therefore, detract from the credibility of the financial reporting process. Additional guidelines concerning reporting format of consolidated financial statements, especially for highly diversified MNCs, are needed to help preserve credibility in financial reporting.

Conclusions

Consolidation of financial statements is appropriate for MNCs where a publicly held parent company owns numerous foreign subsidiaries. Foreign subsidiaries are generally an integral part of the economic entity's activities and the failure to include these subsidiaries' financial data in the consolidated financial statements is detrimental to the usefulness, relevancy, and credibility of consolidated financial information. This omission would also make an assessment of financial position and results of operations difficult. The combined form of financial statements is more pertinent to foreign subsidiaries. Only the complete consolidation of all foreign subsidiaries gives a true and fair view of the financial position and results of operations of MNCs.

SFAS No. 94 was issued to standardize consolidation policies and practices, to improve the consistency and comparability of financial reporting, and to resolve the growing problem of "off-balance sheet financing." The empirical results of this study support some of the above allegations. The adoption and implementation of SFAS No. 94 (1) did not have a material impact on consolidated net income or stockholders' equity; (2) did significantly alter the structure and format of financial statements by encouraging the use of unclassified consolidated financial statements; (3) did mitigate the problem of "off-balance-sheet financing:" (4) did reduce the increasing diversity and inconsistency in consolidation policies and practices; (5) caused consolidated companies to appear more leveraged; and (6) did improve, although insignificantly, the short-term liquidity of consolidated companies.

It is reasonable to assume that a parent company stockholder would be interested in the performance of an investment in a subsidiary, but such information cannot be determined from consolidated financial statements prepared in conformity with the provisions of SFAS No. 94. The consolidation provisions under SFAS No. 94 can be justified only if its implementation results in meaningful and useful information. The empirical results of this study fail to provide evidence that meaningful and useful information results from the adoption of SFAS No. 94. The effective implementation of SFAS No. 94 requires more clear and stricter guidelines on the structure and format of presenting consolidated financial information. The results provide evidence of diversity in reporting practices which is unacceptable and meaningless and, accordingly, in need of reform and clarification.

At least several years will be needed before the full implications of the new accounting rules on consolidation are known. At this point they appear to be an improvement over the previous pronouncements. However, the unfavorable impacts of SFAS No. 94 on the debt-to-equity ratio may increase the probability of the technical violation of debt covenant agreements specified in terms of such accounting numbers. The increase in the debt-to-equity ratio may have a negative impact on companies' bond ratings and may also increase contracting costs in response to management compensation plans, debt covenant violations, or dividend restrictions. The proper implementation of provisions of SFAS No. 94 calls for reconsideration and reform by the EEC and IASC in their requirements and standards for MNCs' consolidation of financial statements. The financial statements of all foreign affiliates must be consolidated, regardless of their capital position or whether they are financing companies. A foreign subsidiary may be excluded from a consolidation only if it is of minor importance for the purpose of the consolidated financial statements, or if it will result in meaningless and irrelevant consolidated financial statements prepared in a single currency.

Footnotes

1. The EEC, formerly known as the European Common Market, was formed in 1957 by the Treaty of Rome and now has 12 members: Belgium, Denmark, France, West Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, the United Kingdom, Spain, and Portugal.
2. Control is usually presumed to exist when the parent company owns more than 50 per cent of the voting shares of the foreign subsidiary.
3. Note that from the 142 selected companies, 129 (91 per cent) were identified to have some type of global business activities and involved in a number of foreign operations.
4. *The Wall Street Journal* reports that in October 1987, Houston-based Tenneco Inc. created a holding company to keep separate the heavy debt of its pipeline business from its other businesses.

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Perceptions of Auditor Independence: A Cross-cultural Study

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Key Words: Auditor; Cross-cultural; Experiment; Independence

Abstract: *Attempts to harmonize auditing standards internationally motivated the question addressed in this study: do perceptions of auditor independence differ across countries? An experiment was conducted to examine the impact of four variables on the perception of professional accountants in the United States, the Philippines, and West Germany.*

The results show that significant differences in perceptions of auditor independence exist across the three subject groups on all four variables. In general, the German subjects were most likely and the Philippine subjects were least likely to perceive independence as being impaired.

Introduction

With the spread of investment and business enterprise across national boundaries, the processes of accounting and auditing within any one nation are no longer of interest merely to the inhabitants of that nation. The need for high standards of accounting and auditing is now international in scope, and the standards employed in one country are often of concern to people in other countries who rely upon the financial reports of multinational enterprises.

International harmonization is the process whereby differences in accounting and auditing standards between countries are reduced. Considerable effort has been expended in this area in recent years. The International Accounting Standards Committee (IASC) was formed in 1973 to establish international standards of accounting and the International Federation of Accountants (IFAC) was established in 1977 to develop and enhance a coordinated worldwide auditing profession with harmonized standards.

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It has been argued that a set of international auditing standards would enhance the confidence users can place in financial statements prepared in other countries, thereby improving international comparability and facilitating the efficient allocation of economic resources worldwide through the integration of capital markets.[1]

Culture is often cited as the most serious barrier obstructing the harmonization process.[2] Differences in culture across countries give rise to problems of interpretation. For example, while the auditing standard requiring auditor independence may be the same across countries, systematic cultural differences across countries may cause perceptions of auditor independence to differ cross-nationally.

Independence

Stamp and Moonitz[3] have identified professional independence as one of the two critical issues in international auditing. Enforcement of standards is the other issue. The very essence of the auditor's attest function requires that he/she be independent. Without independence, readers of financial statements would not be able to rely on the auditor's report no matter how competent the auditor is. Moreover, it is not enough that the auditor be independent – it is important that the auditor be *perceived* to be independent as well.[4]

The perception of auditor independence has been extensively examined as a within-country phenomenon.[5] The existence of differences or similarities in the perception of independence *across* countries has not yet been addressed.

The Research Question

The recent attempts to harmonize auditing standards warrants an examination of the issue of whether the perception of auditor independence varies across countries. The basic question addressed in this study is: "Do professional accountants in different countries have different perceptions of auditor independence?" The answer to this question can provide information to international auditing standard-setting bodies as to whether cross-cultural perceptions of independence act as a hindrance in developing international auditing standards. Even if auditors in different countries use the same auditing techniques, the credibility that financial statement users can place in the audit process will differ between countries if the underlying concept of independence differs between countries. If the results of this study show that independence is perceived differently across countries, then the process of developing a framework in which audit opinions have similar meaning and value across all countries will be more difficult to achieve. If, on the other hand, this study finds similar meaning and value across countries, then the standards setters may not have to be concerned with cultural differences (at least with regard to independence) as an obstacle in achieving international harmony.

The results should also help international accounting firms in deciding whether or not to adopt common policies on professional standards to apply to their home offices and offices abroad. Success in implementing such common policies depends on their acceptance by indigenous partners and employees. This acceptance may be

a function of culture, and cultural differences among staff in different locations may inhibit this process of standardization.[6]

Relevant Literature

Cross-Cultural Studies

Several studies have examined the impact of culture on accounting and financial reporting. Jaggi[7] hypothesized that the reliability of disclosures in developing countries is not likely to be high because of the cultural environment in those countries. Jaggi's hypothesis was supported by studies on the disclosure of information in developing countries by Singhvi[8] in India and Seidler[9] in Turkey.

Frank[10] examined the impact that cultural and economic factors have on accounting principles and reporting practices in 38 countries. His results support the hypothesis that a country's cultural environment influences its accounting practices.

A number of studies have investigated the professional and work characteristics of accountants across cultures. In a study of Australian and US auditors, Ferris et al.[11] found few differences with respect to personal value structures, perceptions of the work environment, and work motivation levels. The authors suggest that cross-national differences should be insignificant between countries of approximately the same level of economic development and with language similarities.

In contrast, Amernic et al.[12] in a study of the Anglophile and Francophile chartered accountants in Quebec, Canada, found that culture has a significant effect on certain professional and work values. Thus, in the few studies that have investigated the impact of culture, results generally indicate a significant effect on financial reporting and auditor behavior.

Studies of Auditor Independence

Various aspects of auditor independence have been studied on a within–country basis, in the United States, the UK, Canada, West Germany, and Malaysia.

Studies in the United States by Schulte,[13] Titard,[14] Hartley and Ross,[15] and Shockley[16] found that respondents questioned the ability of a CPA to maintain independence when performing MAS in addition to the external audit. McKinley et al.[17] on the other hand, found that MAS has not significantly affected users' perceptions of auditor independence. Consistent with most of the studies in the United States, Gul and Yap[18] found that a majority of the respondents in Malaysia believed that expansion by audit firms into non-audit services reduced the auditor's independence.

Shockley,[19] in examining the perception of CPAs and financial statement users with respect to independence of public accounting firms, found that smaller firms are perceived as having a higher risk of losing independence. Similarly, McKinley et al.[20] found that the Big Eight accounting firms were considered more independent and the financial statements which accompanied their audit reports were believed to be more reliable than the financial statements included with a non–Big Eight audit report.

Lavin[21] found that on the issue of auditor independence, a majority of his respondents of accountants, financial analysts, and bank lending officers was more in agreement with AICPA positions than with SEC positions.

Dykxhoorn and Sinning[22] (DS) conducted an extension of Lavin using West German Wirtschaftspruefer (WP) as subjects. DS included 10 of the 12 audit–client relationships used by Lavin and made a comparison of the WP majority responses with the majority responses of the US CPAs obtained by Lavin. The results showed that in 8 of the 10 situations the same majority responses (either independent or not independent) were obtained by both groups (CPAs and WPs), with the WPs having a larger majority than CPAs in situations where the auditor's independence is deemed impaired. However, in situations where the auditor's independence is not deemed impaired, the CPAs have a larger majority than the WPs. These results would suggest that German WPs are more conservative in their perception of auditor independence than the US CPAs.

Because of the several-year lag between Lavin's study and the study by DS, the CPA–WP comparison is not strictly valid and the results must be viewed with caution. CPA responses might have changed between the time when Lavin conducted his study and DS conducted theirs.

In a study of British chartered accountants (CA), Firth[23] included all 12 of Lavin's audit–client relationships in his instrument consisting of 29 situations. Although Firth did not attempt to compare his results with those of Lavin's, a comparison of the results of the two studies yields some interesting observations. Of the 12 audit–client relationships, the CAs in Firth's study were in agreement with the CPAs in Lavin's study in 10 of 12 cases. In four of six cases where both groups arrived at a consensus of "independent", a higher percentage of CAs indicated "independent" than of CPAs. Although it appeared that there was a consensus between the groups, differences in percentages of agreement were greater than 5% in 6 of 10 situations. Thus, it would appear that differences in perceptions of independence might exist between British and American professional accountants. However, as in the DS study, such a comparison is not strictly valid and such a conclusion must be viewed as tentative.

Although the issue of auditor's independence has been extensively examined, previous studies were limited to one country. To date, no empirical study has examined perceptions of auditor independence in more than one country simultaneously. The current study extends the literature by simultaneously examining the perceptions of auditor independence in three countries.

Methodology

The objective of this study was to examine empirically whether a consensus on the perception of auditor's independence exists across countries. Specifically, the study examined the effects of four variables on the perceptions of members of the accounting profession in three countries: the United States, West Germany, and the Philippines. The four variables are (1) the percentage of total office revenues generated from the

client; (2) whether management advisory services (MAS) are provided in addition to the external audit, (3) the number of month's fees from the client remaining unpaid; and (4) whether the spouse of a member of the audit staff is employed by the client.

Initially, several potential independent variables were identified from a review of the accounting literature. The four variables described above were chosen after pretesting the instrument with professional accountants from three Big Eight accounting firms.

Hypotheses

The overall null hypothesis tested in this study is:

There is no difference in the perception of the risk of losing independence between professional accountants in the United States, the Philippines, and West Germany.

The null hypotheses associated with each of the independent variables appear below:

H1: There is no difference in the perception of professional accountants in the United States, the Philippines, and West Germany of the risk of losing independence between an audit firm with a relatively *large* percentage of its revenue derived from a particular client and an audit firm whose billing to a particular client is a relatively *small* percentage of total revenue.

H2: There is no difference in the perception of professional accountants in the United States, the Philippines, and West Germany of the risk of losing independence between an audit firm that *provides* MAS to a client and an audit firm that *does not provide* MAS to a particular client.

H3: There is no difference in the perception of professional accountants in the United States, the Philippines, and West Germany of the risk of losing independence between an audit firm with fees remaining unpaid by a particular client for a relatively *long* period of time and an audit firm with fees remaining unpaid by a particular client for a relatively *shorter* period of time.

H4: There is no difference in the perception of professional accountants in the United States, the Philippines, and West Germany of the risk of losing independence between an audit firm where the spouse of a member of the audit staff *is employed* by the client and an audit firm where the spouse of a member of the audit staff *is not employed* by the client.

Each of the independent variables is discussed below.

Client Size

A significant issue frequently raised in the accounting literature is whether auditors can render independent judgments on larger clients on which they may have economic dependence.[24] Despite the concern, there is currently little professional guidance. Although the ethical standards of the AICPA do not consider this issue, the Accountants International Study Group[25] recommended that auditors be restrained from accepting

engagements for which the fee constitutes 10 per cent or more of the auditor's total fee income.

Pany and Reckers[26] asked a group of stockholders to indicate their perceptions of an auditor's ability to remain independent under various conditions, one of which was the size of the client. One per cent and 10 per cent of office revenues, respectively, were chosen to approximate a small to average size client and a large client. Results showed that the client size factor was insignificant. However, it was noted that in all cells the mean score of the larger client level of the size of client factor exceeded the mean Scores of the smaller client level. The controversial nature and paucity of research on the issue of client size warrants additional empirical investigation.

MAS

Providing MAS raises unresolved questions of auditor objectivity and independence. MAS has experienced rapid expansion and has been identified as a "major issue" for the profession by the AICPA future issues committee.[27] The question of whether providing MAS harms independence has been extensively debated and is the most prevalent topic for independence-related research.

A number of studies support the argument that MAS increases an audit firm's independence or that providing MAS does not significantly affect perceptions of financial statement reliability.[28] On the other hand, several studies found that auditor independence was perceived to be impaired when MAS is provided.[29] Adding to the confusion are the findings of Shockley[30] and Knapp[31] that although the MAS factor was found to affect significantly the perception of independence, it did not affect the users' subsequent decisions.

Because of the conflicting results of previous research, the MAS-independence issue is far from resolved and therefore represents an important variable to be considered in this study.

Past Due Fees

Financial interest in the client is *prima facie* evidence of a lack of independence. Stamp and Moonitz[32] recognized that the issue of unpaid fees provides a difficulty in drawing a line between independence and involvement in the financial interest of the client because the client pays fees to the auditors and provides them with their livelihood. It may also appear that the auditor is providing working capital for his client and that the collection of past due fees may depend on the nature of the auditor's report on the client's financial statements.[33]

On the question of whether an audit firm's independence would be considered impaired with respect to a client whose fees for the preceding year are unpaid and past due, the AICPA Ethics committee ruled (ET 191.104):

> Independence of the member's firm *may be impaired* if more than one year's fees due from a client for professional services remain unpaid for an extended period of time...

> At the time a member issues a report on a client's financial statements, the client should not be indebted to the member for more than one year's fees.[34]

The variable "past due fees" was selected to represent a potential financial relationship between auditor and client. This relationship has not been examined in any prior studies on auditor independence.

Spouse of a Member of the Audit Staff Employed by the Client

Personal relationships with the client, such as those arising from family bloodlines and marriage, give rise to circumstances that may impair an auditor's independence.[35] One form of personal relationship is the client's employment of the spouse of a member of the audit staff.

In a reply to the question of whether the independence of an auditor whose spouse is employed as a bookkeeper for the audit client would be considered impaired, ET 191.010 stated:

> Independence of the CPA firm would not necessarily be considered to be impaired... If, however, the spouse's scope of responsibilities or activities extends beyond the bookkeeping function into areas of accounting and management decisions, independence of the member's firm would be considered impaired.[36]

The effect of this variable on auditor independence has not previously been studied. The position of computer programmer was selected to operationalize employment by the client. It was important to select a specific position to avoid ambiguity but which at the same time was not obviously prohibited by the AICPA Professional Standards.

In using issues identified in the US auditing literature to examine the perception of independence across countries, an implicit assumption is being made that these issues are not unique to the US auditing environment but rather that they are issues of concern in all countries where auditors are required to maintain independence from their clients. The validity of this assumption is more apparent where countries have similar concepts of independence and similar aspirations and goals for the auditing profession.

Countries Selected

Data were gathered in three countries to examine the impact of culture on the perception of independence. Therefore, in addition to the four treatment variables described above, culture represents a non-repeated grouping variable employed in this study.

The countries included in the study are the United States, the Philippines, and West Germany. The selection of these countries was based on five criteria: (1) similar concepts of independence; (2) representation in IASC and IFAC; (3) the

important role each country plays in harmonization; (4) different languages; and (5) location in different continents.

The primary criterion in the selection of countries was the existence of similar concepts of independence. It was important to control for similar concepts of independence because otherwise rejection of the null hypotheses might be explained by differing concepts of independence rather than different cultures. Moreover, if perceptions differ among countries with similar concepts of independence, then they are likely to differ among countries without similar concepts. Each of the three countries included in the study has a similar concept of independence that stresses both independence in fact and in appearance.[37]

The second criterion required that countries be represented in both IASC and IFAC. Representation in IASC and IFAC is indicative of interest by professional bodies in harmonization. Members of these organizations are more likely to be similar in their aspirations and goals for the auditing profession and therefore the four treatment variables are likely to be important in all three countries.

The third criterion was included to ensure that important countries were being studied. The concept of "vital countries" for accounting internationalization was originated by Mason.[38] Mason's criteria to select vital countries include: (l) economic factors (e.g., number and size of multinational corporations) and (2) accounting factors (e.g., contribution to accounting thought, strength of accounting profession). Among those that emerged were the United states and West Germany. Although the Philippines was not on Mason's list, the Philippines plays an important role in developing the accounting profession in several South-East Asian countries[39] and accordingly was considered to meet the criterion of importance.

The last two criteria of different language and location in different continents were used to make sure that the countries under study differed significantly as to culture.[40] This was necessary to ensure three distinct levels for the culture variable.

Subjects

Members of professional accounting bodies in these three countries were selected as the subjects for this study. Professional accountants were selected (rather than users such as bankers, investors, etc.) because of the familiarity of this group with the concept of independence. If perceptions differ among members of the profession who are intimately familiar with the concept, then it would be unlikely that users would share similar perceptions. Also, it is the professional accountants who play a leading role in the harmonization of auditing standards.

A random sample of 500 Certified Public Accountants in the United States was selected from the AICPA List of Members and a random sample of 400 Wirtschaftspruefer in West Germany was selected from the Institut der Wirtschaftspruefer (IdW) directory. Due to the unavailability of a complete list of members of the Philippine Institute of Certified Public Accountants (PICPA), the instrument was administered to 200 randomly selected staff members of the three largest public accounting firms in the Philippines.

Scenario 1.	
Client size (as a percentage of office revenues)	3%
MAS rendered	yes
Number of months client's fees remain unpaid	12 months
Spouse of a member of the audit staff of the CPA firm is employed as a computer programmer by client	yes
Risk that external auditor's independence *may become* impaired:	
very low risk 1 2 3 4 5 6 7 8 9 very high risk	

Fig. 1. Example scenario.

Research Instrument

The research instrument consisted of 17 scenarios, one of which was a repeat scenario. An example scenario is presented in Fig. 1. For each scenario, subjects were asked to indicate the level of risk that an auditor's independence may become impaired along a numerical scale from one (very low risk) to nine (very high risk). Thus, the dependent variable in this study was the risk that an audit firm's independence may become impaired.

Each of the scenarios represented 1 of 16 possible combinations of 2 levels of the 4 treatment variables (a full factorial design). Fig. 2 shows the two levels for each of the treatment variables. The choice of 10% to indicate the high level for client size was based on the Accountants International Study Group's recommendation. Choosing the low treatment level for the same variable presented a problem in that the difference could not be too obvious as to direct the subjects into a no choice position, e.g., the choice of 1% vs. 10%. After much consideration, 3% appeared to offer more of a choice vis-a-vis 10% than 1% does. The selection of 12 months to represent the high treatment level for "number of months fees remaining unpaid" was based on the AICPA Ethics Ruling that independence may be impaired if *more* than one year's fees due from a client remain unpaid (ET 191.104). Again, the choice for the low level of 3 months was arbitrary so as to provide a less clear choice than say 1 month is against 12 months. For the variables "MAS provided" and "spouse employed by client" the use of "yes" to represent the high treatment level and "no" for the low level is obvious. The 16 scenarios were randomly ordered.

Additional information as to the nature of the audit firm and the client firm was provided. The hypothetical audit firm was described as a national firm and the

	Treatment Levels	
	1	2
Independent Variables	(low)	(high)
Client size (as % of office revenues)	3%	10%
MAS rendered	No	Yes
Number of months fees remaining unpaid	3 mos.	12 mos.
Spouse of a member of the audit staff of the CPA firm is employed as a computer programmer by client	No	Yes

Fig. 2. Treatment levels of independent variables

hypothetical client firm was described as publicly held. Additional questions were included at the end of the instrument to collect demographic data of the respondents.

The original language used in the instrument was English. The English version of the instrument was used in the United States and the Philippines. The instrument was translated into German for use in West Germany. To ensure that the translated instrument carried the same meaning as the English original, the German translation was translated back into English by someone other than the original translator (back translation).[41]

Data Analysis

The experimental task called for repeated judgments by individual subjects across 16 different scenarios (scenario 17 was a duplicate). The experimental design was a repeated-measures block design with one grouping factor (country) and four trial factors.[42]

The research hypotheses were tested using repeated measures Analysis of Variance (ANOVA) which provides both the univariate and multivariate tests of significance for each of the treatment variables, the grouping variable, and each of their interactions.

The test of the overall hypothesis of no difference in the perception of auditor independence between professional accountants in the United States, Philippines, and West Germany is equivalent to a test of the grouping variable, country. Rejection of this hypothesis would indicate an overall difference in scale judgments across the three groups. Tests of Hypotheses 1 through 4 are equivalent to the test of interactions between the grouping variable and treatment variables indicating differences between groups in the perceived significance of the treatment variables. Rejection of the stated null hypotheses (H1 through H4) would indicate that the scale judgments of the subject groups (countries) differ in an absolute sense.

If a significant overall difference exists, then the next step in the analysis was to determine which group means were significantly different from one another. A relatively conservative approach developed by Tukey was used to make pairwise comparisons.[43]

Responses

Information on sampling and return rates in each of the three countries is presented in Table 1. Of the 449 questionnaires deliverable in the United States, 119 responses

Table 1. Summary of response rates

	US	Philippines	West Germany
Questionnaires mailed/administered	500	200	400
Undelivered	51	–	30
Subjects contacted	449	200	370
Subjects replying	119	108	85
Response rates	26.5%	54%	23%

Table 2. Summary of demographic data on respondents

	US	Philippines	West Germany
Age (years) : Mean	41.1	28.5	50.4
Number of years in current position: Mean	11.8	6.4	17.1
Public accounting experience (years): Mean	15.9	6.5	NA
Nature of work:			
Public accounting	90.7%	100%	97.6%
Other	9.3	0	2.4
Type of public accounting firm			
Local	42.6%	6.9%	44.1%
Regional	10.2	12.9	22.1
National	3.7	28.7	18.2
International	43.5	51.5	15.6
Education:			
Bachelor's	70.9%	90%	–
Master's	26.6	10	66%
Ph.D.	2.5	–	34

were received for a response rate of 26.5%; 85 of 370 questionnaires deliverable in West Germany were completed for a response rate of 23%; and in the Philippines, of 200 questionnaires administered, 108 were completed for a response rate of 54%. Thus, the data were obtained from 312 respondents in three countries.

A summary of the demographic data collected from the respondents is shown in Table 2. To summarize, the respondents are predominantly employed in public accounting with several years of practical experience and all are university educated.

Test of the Reliability of the Instrument

Because the instrument was administered in three different countries questions about the reliability might arise. Reliability of the instrument was measured across all groups and also within groups using coefficient alpha[44] (see Table 3). The alpha coefficient across all subjects was 0.9386 indicating how well the treatment variables captured the construct of impairment of independence. The coefficient for each country approached the magnitude of the overall alpha. Thus, the instrument was deemed to be reliable in all three countries.

Test of Subject Consistency

To measure how consistent each subject was in his responses, correlation coefficients were calculated on the two identical scenarios across all groups and also within each group. The overall correlation coefficient across the three groups was 0.8448. The

Table 3. Summary of alpha coefficients

	Total	USA	Philippines	West Germany
Alpha coefficient	0.9386	0.9469	0.9387	0.9255

Table 4. Test of hypothesis for between group effect

Source	Type III SS	Mean square	F value	PR>F
Group	1345.8049	672.9024	17.12	0.0001

average correlation coefficient for each country showed the United States with 0.9251, the Philippines with 0.7194, and West Germany with 0.8395. These high correlation coefficients indicate that the individual subjects were consistent in their judgments on auditor independence.

Results of Hypothesis Testing

The overall hypothesis of no group differences was examined by testing for a between subjects effect of the grouping variable, country. The results presented in Table 4 show that the hypothesis of no group difference is rejected at the 0.0001 level. Thus, significant differences between groups across all four treatment variables were found.

Hypotheses 1–4 were tested by examining the interactions between the grouping variable and each of the four treatment variables. Table 5 shows the results of the multivariate tests for Hypotheses 1–4. The null hypotheses of no group differences on all four variables were rejected at the 0.01 level. The univariate tests produced similar results.

Table 5. Multivariate tests of hypotheses for within-subject effects

Statistic	Value	F	PR>F
Hypothesis 1: No group–client size interaction effect			
Wilks' Lambda	0.9693	4.874	0.0082
Pillai's Trace	0.0307	4.874	0.0082
Hotelling–Lawley Trace	0.0316	4.874	0.0082
Roy's Greatest Root	0.0316	4.874	0.0082
Hypothesis 2: No Group–MAS interaction effect			
Wilks' Lambda	0.9492	8.241	0.0003
Pillai's Trace	0.0508	8.241	0.0003
Hotelling–Lawley Trace	0.0535	8.241	0.0003
Roy's Greatest Root	0.0535	8.241	0.0003
Hypothesis 3: No group–fees interaction effect			
Wilks' Lambda	0.7199	59.912	0.0001
Pillai's Trace	0.2801	59.912	0.0001
Hotelling–Lawley Trace	0.3890	59.912	0.0001
Roy's Greatest Root	0.3890	59.912	0.0001
Hypothesis 4: No group–spouse interaction effect			
Wilks' Lambda	0.9003	17.046	0.0001
Pillai's Trace	0.0996	17.046	0.0001
Hotelling–Lawley Trace	0.1107	17.046	0.0001
Roy's Greatest Root	0.1107	17.046	0.0001

Table 6. Summary of Tukey's pairwise comparison test for the four treatment variables. Group 1, USA; group 2, Philippines; group 3, West Germany

Group comparison	Simultaneous lower confidence limit	Difference between means	Simultaneous lower confidence limit
Client size (C) variable			
1–2	–0.2647	0.1268	0.5183
1–3	–0.8379	–0.4206	–0.0033 *
2–3	–0.9743	–0.5474	–0.1204 *
MAS (M) variable			
1–2	0.0216	0.2834	0.5452 *
1–3	–0.4803	–0.2013	0.0778
2–3	–0.7702	–0.4846	–0.1991 *
Past due fees (F) variable			
1–2	1.3354	1.7206	2.1058 *
1–3	0.8768	1.2874	1.6980 *
2–3	–0.8533	–0.4332	–0.0131 *
Spouse (S) variable			
1–2	–0.1170	0.4381	0.9932
1–3	–0.6304	–1.0387	–0.4469 *
2–3	–2.0822	–1.4768	–0.8713 *

* Denotes significancs at the .05 level.

Pairwise Comparison Results

The pairwise comparison results are summarized in Table 6. The pairwise comparisons related to the client size variable indicate a statistically significant difference between groups 1 (United States) and 3 (West Germany), with the mean response from the West German subjects exceeding that for the US subjects (as indicated by the negative difference between means of –0.4206). Larger means indicate higher risk of impairment of independence. The mean response from group 3 (West Germany) was also found to be significantly higher than that from group 2 (Philippines). There was no significant difference between the means of groups 1 and 2 (United States and Philippines).

For the MAS variable, the pairwise comparisons show a statistically significant difference between groups 1 (United States) and 2 (Philippines), with the mean response from the US subjects exceeding that for the Philippine subjects by 0.2834. The mean response from group 3 (West Germany) was also found to be significantly higher than that from group 2. There was no significant difference between the means of groups 1 and 3.

The pairwise comparisons on the past due fees variable indicate a statistically significant difference between groups 1 and 3, and between groups 1 and 2 with the mean response from the US subjects exceeding that for the West German and Philippine subjects. The mean response from group 3 was also significantly higher than that from group 2.

The pairwise comparisons related to the spouse variable indicate a statistically significant difference between groups 1 and 3 with the mean response from the West German subjects higher than that for the US subjects. The mean response from

group 3 was also found to be significantly higher than that from group 2. There was no significant difference between the means of groups 1 and 2.

Given the direction of the scale used in this study, i.e., 1 = low risk, 9 = high risk, the results of the pairwise comparisons indicate that:

The West German subjects were more likely to view larger client size as impairing auditor independence than either their US or Philippine counterparts

The West German and the US subjects were more likely to view rendering of MAS as impairing auditor independence than their Philippine counterparts

The US subjects were more likely to view past due fees as impairing independence than the West German subjects who in turn were more likely to view past due fees as impairing independence than the Philippine subjects

The West German subjects were more likely to view employment of the spouse of a member of the audit staff by the client as impairing independence than either their US or Philippine counterparts; and

The Philippine subjects were less likely to view all four variables as affecting independence than their West German counterparts.

The directions shown by the results of the pairwise comparisons are confirmed by inspecting each group's mean difference between the two treatment levels for each of the treatment variables. The differences in means are reported in Table 7. West Germany had the highest mean differences for the client size, MAS, and spouse variables, Whereas the United States had the highest mean difference for the past due fees variable. The Philippines had the lowest mean differences for all four variables.

Analysis of Covariance

Of the demographic data collected (see Table 2), two factors showed the greatest disparity among the groups: age and educational background. An analysis of covariance was performed to test the effect these two factors had on group differences for each of the scenarios. The results indicate that of the 16 scenarios, only 2 were significantly affected at the .05 level: Scenario 5 by the age factor and scenario 7 by educational background. Thus, neither age nor educational background appear to override country as the main explanatory variable and therefore can be ruled out as competing hypotheses in explaining the variance in responses.

Table 7. Mean differences between factor levels by group

Effect	US	Philippines	West Germany
Client size (3%, 10%)	1.0882	0.9614	1.5088
MAS (no, yes)	0.5252	0.2418	0.7265
Past due fees (3 months, 12 months)	1.7521	0.0315	0.4647
Spouse (no, yes)	1.4790	1.0409	2.5176

Summary and Conclusions

The hypotheses related to the four treatment variables were all rejected at the 0.01 level indicating that significant differences do exist among members of the accounting professions in the United States, the Philippines, and West Germany as to the impact these variables have on perceptions of impairment of audit independence.

The pairwise comparison tests yielded some interesting results. In general, the West German subjects were more conservative, i.e., indicated a higher risk of impairment, than either the US or Philippine subjects. Only for the "past due fees" variable were the US subjects more likely to view independence being impaired than the West Germans. This result might have been influenced by the fact that the AICPA has specifically ruled that past due fees exceeding 12 months impairs independence. There is no knowledge of a similar ruling in West Germany.

Of the three groups studied, the Philippine subjects were uniformly the least conservative (most liberal) in their perception of independence with regard to the four variables studied.

Since the United States, the Philippines, and West Germany have similar concepts of independence, the results appear to indicate cultural differences operating that make the West German professional accountants more conservative and the Philippine professional accountants more liberal with regard to their perceptions of independence. While it is beyond the scope of this study to identify cultural (or other environmental) factors consistent with these results, some examples of cultural factors that might influence the results include:

1. Divergence in values such as particularism or universalism, i.e., a particularistic value orientation implies institutionalized obligations of friendship, while universalistic value orientation stresses institutionalized obligations to society and puts less stress upon interpersonal considerations,[45] and
2. Nature of the indigenous authority system, nature of the socialization system, and degree of culturally determined tolerance for cognitive inconsistency.[46]

The results suggest that perception of auditor independence is indeed sensitive to cultural differences. Even among the well-developed nations such as the United States and West Germany, where one might expect a semblance of similarity due to a highly educated and trained accounting profession, differences could exist as shown in this study. The relationship between the United States and the Philippines and the heavy influence the US accounting and auditing standards and practices have had on the Philippine accounting profession suggest that significant differences would not exist between the US and the Philippine accountants on such issues as "auditor independence." However, such conjecture was not supported by this study. The results of this study have shown that "culture" could lead to a difference in how an issue is perceived even among a relatively homogenous group like professional accountants.

The findings of this study suggest that the process of harmonization indeed faces a long and difficult road to realization. This does not mean that harmonization will not take place, it may occur simply because circumstances, such as the seemingly

unstoppable growth and expansion of multinational enterprises and the international flow of capital, will demand that there be harmonization. The pertinent question might be "how to achieve harmonization amidst the existence of cultural differences?"

One possible implication of the study is the necessity of classifying international accounting and auditing standards into two groups: (1) those involving forms and formats, and (2) those involving judgmental values and issues. Harmonization might be relatively easily achieved regarding forms and formats, but may be very difficult if not impossible to achieve with respect to those standards involving value judgments such as "independence".

Limitations

The generalizability of the results of this study is subject to the following limitations:

1. The results may be valid only for the three countries studied and may not be generalizable to other countries
2. The method used for gathering data from the Philippines limits the generalizability of the results of the data to professional accountants in the Philippines working in firms other than those sampled.

One of the more serious problems in the use of mailed questionnaires is non-response bias, i.e., respondents are not representative of the population sampled. To test for the existence of non-response bias, a method used by Buzby[47] was employed. The mean response for each of the 16 scenarios was calculated for the last 40 returned questionnaires and for the first 40 responses. The results in the United States showed that of the 16 scenarios, the mean difference for only one scenario (Scenario 3) was significant at the 0.10 level. All other scenarios failed to achieve a significance level (alpha) of 0.16 or less. Thus, there is no indication that the US respondents are non-representative of the population of US CPAs sampled. It was not possible to test for non-response bias for the West German and Philippine responses due to an inability to date the returned questionnaires.

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The International Journal of Accounting

Book Reviews

Audit Reports on the Financial Statements of European Multinational Companies: A Comparative Study *by Simon Archer, Stuart McLeavy, and Jean-Bruno Dufour, A Research Report prepared for the Institute of Chartered Accountants in England and Wales, June 1989, 81pp.*

As the important date of December 31, 1992 is quickly approaching, members of the European Community (EC) are attempting to minimize the differences in their legal, economic, and financial systems in order to facilitate the free flow of goods and services among themselves. Because of a prolonged period of historical uniqueness, these differences are significant and may not be easy to remove. A good example of these differences is in the area of financial reporting and auditing.

In their research report, *Audit Reports on the Financial Statements of European Multinational Companies: A Comparative Study*, the authors attempt to analyze audit reports of 245 multinational companies from 16 European countries which are listed on at least one foreign stock exchange (multiple listing companies). According to the authors, the rationales for the selection of multiple listing companies for this study are:

1. The need for effective and credible auditing is greater in a multinational setting than in a single country setting because management is separated from the outsiders by greater differences in culture, political and economic systems, geographical boundaries, etc. (this argument is supported by Choi and Mueller, 1984, and Stamp and Moonitz, 1978).
2. Information asymmetry, which is detrimental to the capital market, is likely to arise in a multinational setting. Information asymmetry is a situation whereby participants in the capital market have unequal access to information relevant for trading decisions. Nationals of the country in which a financial report originates are likely to be more advantageous than non-nationals because of their superior knowledge of their national culture and accounting practices. (see Lev, 1988).

The audit reports selected were compared with a set of criteria including the main ones indicated in International Auditing Guideline (IAG) No. 13, "The Auditor's Report on Financial Statements", (October 1983) and Auditing Standards Board (ASB) Statement 8, "The Audit Report", (May 1981).

This short research report (99 pages) consists of 8 chapters. Chapter 1 describes the background and objectives of the study. The identification of the objects and the sample selection procedures were also discussed.

Chapter 2 provides an overview of the 8 basic elements of an audit report as identified by IAG 13. The form, content, and wording of European audit reports were discussed in general as they relate to the International Auditing Guideline.

Chapter 3 discusses the international standards for the audit report. It states that neither IAG 13 nor ASB 8 purports to be a standard. They are merely guidelines, intended for national accounting bodies to work towards them rather than strictly mandatory.

Chapter 4 focuses on the national practices in the form and content of the audit report among European Community member states. For each multinational company selected from these member states, its audit report was compared with the recommendation of the international audit guidelines. Included in the group were Belgium, Denmark, Eire, France, Germany, Italy, Luxembourg, Netherlands, Spain, and the United Kingdom.

On the other hand, in Chapter 5, similar analyses were applied to multinational companies in non-European Community countries. Included in this group were Austria, Finland, Norway, Sweden, and Switzerland. Lichtenstein has a sample size of one and therefore was dropped from the analyses.

Chapter 6 summarizes the results of the analyses made in Chapters 4 and 5. Among the 15 countries under study, there are very considerable variations in their audit reporting practices. This ranges from the very high level of compliance with IAG for Eire and the United Kingdom to the very low level of compliance for Germany, Sweden, and Austria. Furthermore, the study also found out that in general, there is a higher degree of homogeneity among the reports within the same country, with the United Kingdom and Eire being the most homogeneous and Belgium and Luxembourg the least homogeneous.

Chapter 7 examines various issues of translation which arise in the context of audit reporting. According to the authors, there is a considerable variety in the relationship between translated financial reports and their original versions.

The final chapter (Chapter 8) is a chapter of summary and conclusion. In addition to reiterating some of their findings, the authors also give some suggestions and observations. For example, they believe that further harmonization of audit reporting within the EC may depend more on the ability and willingness of the Fédération des Experts Comptables Européens (FEE) to lobby the EC Commissioner and Parliament than that of individual bodies to lobby national governments and legislatures. They also observe that large international auditing firms did not seem to exercise any general harmonizing influence in European audit reporting.

This research report is a good introductory text for someone unfamiliar with auditing practices in European countries. It provides an adequate overview of divergent audit reporting practice among individual countries and the EC guidelines. Researchers interested in international audit reporting will find this book useful and informative. I would recommend this book to be used as a supplementary text for a graduate course in international accounting.

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La Comptabilité des Opérations en Devises, *by Daniel Boussard and Jean-Claude Sleziak, Edition ESKA, Paris, 1990, 181pp.*

This book, written in French and authored by a finance professional and an accounting academician, discusses and analyzes the problems of foreign exchange management and accounting. The first part, consisting of three chapters, analyzes foreign exchange risk and foreign exchange accounting.

In the first chapter, the authors present an interesting definition of foreign exchange risk in conjunction with export and import transactions. They define the "economic exchange risk" as the risk of exchange rate fluctuations between the date a business commits itself to an import or export order and the date of the final payment. According to the authors, this economic risk can be divided into two parts: the "commercial risk", which is the exposure to fluctuations between the order date and the invoice date; and the "accounting risk", which is the risk exposure between the invoice date and the final settlement. The currently recommended practice in France, as well as the United States, is to record the import or export transaction at the exchange rate of the invoice date. Current accounting practice, therefore, measures only the risk consequences between the invoice date and the settlement date as either a exchange gain or loss. It does not measure what the authors call the "commercial" risk.

In order to measure the "economic risk" the authors propose that transactions be measured and recorded at the forward exchange rate on the date when the commitment to the transaction is made. They argue that this is the rate which underlies the decision to import or export. If the transaction is recorded at that rate, the entire "economic" risk will be captured by the accounting process.

In addition the authors suggest that on the commitment date the business purchase or the equivalent amount of foreign currency at the forward exchange rate of the settlement date. If this is done, no foreign exchange gain or loss will arise.

The forward rate used for recording the transaction is referred to as the "internal economic exchange rate" (*cours économique interne*). The authors argue that it is the only meaningful exchange rate that measures. realistically the cost of a foreign purchase or the revenue of a foreign sale. If it is used without hedging, it will capture the entire economic risk as either a gain or a loss. Current practice captures only a part of that risk. They argue that only this forward rate makes economic sense and permits a meaningful performance evaluation. Using any other exchange rate, including the so called budgeted, standardized, or reference rates will distort the margins and the accuracy of any profitability analysis. They argue that forward rates are readily available and verifiable.

In the second chapter, they discuss the various means of foreign exchange risk coverage including the balancing of foreign exchange receivables and payables, classical hedging, swaps, and export/import insurance, which is available in most

countries. There is also a good presentation and analysis of the newer instruments such as future contracts and options.

The third chapter covers a discussion of the tools available for an analysis of the firms global exchange risk exposure. The chapter concludes with a brief discussion of options as an instrument of covering exchange risk.

In the second part of the book, the authors present the accounting applications of their ideas. They compare conventional foreign exchange accounting with the accounting application of their concept of an "internal economic exchange rate" using a number of examples. Their method permits management to evaluate import or export transactions as if they had been transacted in domestic currency. Any differences between the future exchange rate at the commitment date and the rate on the settlement date would be regarded as a treasury responsibility (financial management) This way the operational and financial aspects of a transaction can be viewed separately.

In the accounting for foreign currency loans, the authors propose that the current practice of recording interest expense be modified by adjusting the expense account by the difference between the domestic and foreign interest rate. Assume on January 1, an amount of 1200 FF is loaned for three months in US dollars at the dollar rate of 8%. At this time the interest on an equivalent loan in FF is 13%. Also assume that the January 1 exchange rate is 6 FF to the dollar and on March 31 it is 6.24 FF. On March 31 the interest expense on the loan would be 24.96 FF ($200 \times 6.24 \times .08 \times 3/12$). The currency exchange loss on March 31 would be 48 FF ($200 \times (6.24 - 6)$). The equivalent interest expense on the French loan of 1200 FF would be 39 FF ($1200 \times .13 \times 3/12$). Considering only the interest expense, it would appear that the dollar loan is less expensive than the equivalent loan in FF. If we include the foreign exchange loss we find that the dollar loan actually cost FF 72.96 (24.96 + 48.00). To avoid the misleading impression that the foreign currency loan is cheaper, the authors suggest that the foreign exchange loss of 48 FF be reduced by 14.04m FF and the amount be added to the interest expense of 24.96 FF resulting in an interest expense of FF 39.00. The authors argue that this reflects the true opportunity cost of financing the loan.

Chapter five deals with the treatment of foreign exchange transactions in the financial statements. Again the concepts and methods proposed by the authors are compared with the traditional approaches of the French Plan Comptable Générale. The final chapters of the book discuss the application of the ideas proposed in the context of several examples and special situations.

The book not only introduces some challenging new concepts and ideas for the accounting and reporting of foreign exchange transactions, but also includes a very competent treatment of the latest concepts and methods of exchange risk management. It is highly recommended reading for anyone interested in international accounting and finance.

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INSTRUCTIONS FOR AUTHORS

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Accounting in the 1990s: An International Perspective

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Key words: Industrial market economies; Developing countries; Global markets; Economic performance; Adjustment and growth

Abstract: *This paper is an attempt to investigate accounting responses to economic conditions and changes affecting two groups of countries: the industrial market economies and the developing countries. Such investigation is used to identify the main trends which are expected to prevail in the 1990s. The experience of the industrial countries over the past few decades suggests that the accounting function was responsive to economic changes and would continue to be adaptable and dynamic. However, for the developing countries the accounting function appears to be divorced from the changing economic environment. The emphasis on adjustment and growth policies in the 1990s suggests that accounting develop the capacity to serve the operational needs of these policies.*

Introduction

Scholars of accounting history have observed and frequently asserted that the practice of accounting and the development of its techniques and related reports have been closely interwoven with the political and economic developments in various countries. Such assertion is invariably validated by empirical evidence. However, for the purposes of this paper an attempt is made to abstract from the specific country experience by linking accounting responses to economic conditions and changes affecting two groups of countries: the industrial market economies and the developing countries. Such an attempt may provide an appropriate basis for understanding accounting developments over the past few decades and identifying the main trends which are expected to prevail in the 1990s – the last decade of this century.

Accepted for publication: July 10, 1991

The Industrial Market Economies

In the two decades between the early 1950s and the early 1970s, the industrial countries achieved both high growth and low inflation, and until the last years of the 1950s experienced relatively little unemployment or volatile exchange rates. Corresponding to this economic performance, the accounting function was vitalized and the main emphasis of accounting research was on the development of accounting theory and the sharpening of the income concepts, their measurement, and their link to income concepts in other disciplines.

The performance of the industrial countries in the 1970s was quite erratic, and major fluctuations in exchange rates and unprecedented inflation rates were experienced. As a result, considerable emphasis was placed on accounting research into inflation accounting and the currency translation problem.

The 1980s began with a recession which lasted until 1982 and then an economic recovery has started and continued. Accounting has been concerned with the effects of financial reporting on the behavior of various decision makers and markets. The emphasis has been placed on the "economic consequences" of accounting information.[1]

Since the beginning of the 1980s, enhanced efforts to coordinate economic policies among the major industrial countries have been pursued. A key objective has been to reduce inflation to an acceptable level, a goal that has been substantially achieved in a number of countries. More recently, exchange rate and balance of payment considerations have received increased attention, together with the need to sustain activity while safeguarding the progress made in containing inflation.

Efforts to enhance the functioning of markets with a view to improve resource allocation continue to be pursued in all the industrial countries. In addition to the

Table 1. Growth and inflation in the industrial countries, 1965–86 (average annual percentage change)

Indicator	1965–73	1973–80	1981	1982	1983	1984	1985	1986[a]
Real GDP								
Canada	5.0	4.0	3.7	–3.3	3.1	5.6	3.9	3.0
France	5.5	3.0	0.5	1.8	0.7	1.5	1.1	2.0
Germany, Federal Republic of	4.3	2.5	0.2	–0.6	1.5	2.7	2.6	2.7
Italy	5.2	2.7	0.2	–0.5	–0.2	2.8	2.3	2.5
Japan	9.5	4.1	3.9	2.8	3.2	5.0	4.5	2.2
United Kingdom	2.8	1.5	–1.2	1.0	3.8	2.2	3.7	2.3
United States	3.0	2.7	2.1	–2.5	3.4	6.6	2.9	2.6
Industrial Countries[b]	4.7	2.8	1.9	–0.5	2.2	4.6	2.8	2.5
GDP Deflator								
Canada	4.6	8.7	10.8	8.9	4.7	3.7	3.4	2.5
France	5.3	10.5	11.8	12.6	9.5	7.2	5.9	5.0
Germany, Federal Republic of	4.9	4.5	4.0	4.4	3.3	2.0	2.2	3.0
Italy	5.1	17.3	18.3	17.8	14.9	10.8	8.8	7.8
Japan	6.3	6.7	3.2	1.9	0.8	1.3	1.7	2.2
United Kingdom	6.2	16.1	11.5	7.7	5.0	4.1	5.8	3.5
United States	5.0	7.9	9.7	6.4	3.9	3.8	3.3	2.7
Industrial Countries[b]	5.2	9.2	8.3	7.4	5.0	3.9	3.8	3.4

[a] Preliminary.
[b] The weights are the U.S. dollar GDP for each country, divided by the total U.S. dollar GDP for industrial countries.
Source: The World Bank Reports.

deregulation of financial markets, programs of privatization of public sector enterprises have been implemented or announced in a large number of countries. Governments have also turned their attention to the distortions created by the tax systems, and major tax reforms have been implemented or planned in several countries. However, despite these achievements in the area of structural reform, much remains to be done both to reduce labor market rigidities, particularly in Europe, and to dismantle trade barriers – in all countries.

The problem of protectionism is not a new one. As long ago as the 18th century, the advocates of liberalization fought in favor of free trade. The breakthrough in relaxing trade restrictions was only achieved after World War II while the memory of the bitter experiences in the 1930s was still fresh in everyone's mind. However, the global economic slump following the 1973 oil crisis and the increased competition in the labor-intensive industrial sectors in the established industrialized countries from inexpensive Asian products led to increasingly vocal demands for protective measures in the trade sector. The industrial countries are no longer placing the same emphasis on custom's which are fixed under the General Agreement on Tariffs and Trade (GATT), but are now using more subtle and less visible trade restrictions in the form of non-tariff trade barriers. However, that liberalization of world trade benefits all national economies with increased growth potential is recognized.

Notwithstanding the current and potential problem of protectionism, the industrial countries should be entering the 1990s with an improved economic environment conducive to the attainment of higher rates of growth. The trend towards the globalization of financial, capital, and product markets will continue. The implication of these developments for the accounting function may be projected as follows:

1. In the area of financial accounting, an increased emphasis on the harmonization of accounting, auditing, and reporting standards of the various countries; the introduction of the value-added statement to the set of financial reports; and the development of innovative approaches to disclosure.
2. The development of more "relevant" management accounting systems.

The idea has been recognized in the 1980s that manufacturing businesses are faced with challenges, threats, and opportunities as a result of rapid changes in the global market economy. To be successful, businesses in the global market must manufacture and sell "World Class" products (low cost and high quality). There is an explosion in technology that has drastically altered – and will increasingly alter – the global economy. The changes in technology are affecting both markets and manufacturing strategies. Moreover, service industries face a different but very real competitive challenge brought about by deregulation. One result of this increased competition is the greater importance of having successful competitive strategies. Another result is that service industries now have an increased need for cost accounting systems to help them accurately price their services and to control the cost of their processes.

Two generic strategies that firms can use to create and to sustain a competitive advantage respond to these challenges: cost leadership and differentiation. Cost leadership is the development, manufacture, and marketing of the lowest cost product

or service in an industry. This strategy relies heavily on systems for product costing and for cost control of the processes of developing, manufacturing, and marketing products or services. The differentiation strategy requires obtaining a market niche, in which there is little or no competition. Successful implementation of this strategy necessitates knowing the cost of differentiating relative to the benefit of differentiating.

Professors Johnson and Kaplan[2] started the process of restructing our conceptual understanding of management accounting. They argue with vigor that today's management accounting information, driven by the procedures and cycle of the organization's financial reporting system, is too late, too aggregated, and too distorted to be relevant for managers' planning and control decisions. The failings have three important consequences:[3]

1. Management accounting reports are of little help to operating managers as they attempt to reduce costs and improve productivity. Frequently, the reports decrease productivity because they require operating managers to spend time attempting to understand and explain reported variances that have little to do with the economic and technological reality of their corporation.
2. The management accounting system also fails to provide accurate product costs. Costs are distributed to products by simplistic and arbitrary measures, usually direct-labor based, that do not represent the demands made by each product on the firm's resources. When such distorted information represents the only available data on "product costs," the danger exists for misguided decisions on product pricing, product sourcing, product mix, and responses to rival products.
3. Managers' horizons contract to the short-term cycle of the monthly profit and loss statement.

Kaplan and Johnson argue that with the wide use of advanced computer technology, the designers of management accounting systems can combine computer technology with improved software technology to devise reporting and control systems that are more accurate, more timely and, hence, more effective than those designed by their predecessors.[4] Therefore, it would be expected that the 1990s will witness significant developments in this area as firms strive to be effective and efficient global competitors.

The Developing Countries

The international economic environment is most powerfully shaped by the behavior of the industrial countries. Therefore, in the 1950s and 1960s the developing countries shared in the success of the industrial countries and had an impressive growth performance. However, the accounting profession in the developing countries did not make significant advances for a variety of reasons – some cultural and political – others and more important are economic. It is submitted that the following four factors hindered the development of the accounting profession in the developing countries:

1. The nature of the production, i.e., primary commodities of the agriculture and mineral sectors;

2. The concentration of wealth (ownership) in a few entities whether in the private or public sectors;
3. The absence or non-functioning of capital markets; and
4. The delinkage between savings and investments – most domestic savings were invested abroad and the bulk of investments were financed by external resources.

Many developing countries had a significant deterioration in their growth prospects in the late 1970s and early 1980s with the onset of the debt crisis, progressive worsening in their terms of trade, and slow down in growth in industrial countries, exacerbating the often negative impact of weak and rigid domestic economic policies. The economic performance of developing countries has in fact been much weaker than suggested by GDP growth statistics if it is assessed in terms of development in real domestic absorption defined as real GDP less the real foreign balance as it is a better indicator of national living standards broadly construed. A recent study indicates that except for Asia, where living standards rose fairly steadily through the 1980s, real absorption per capita in much of the developing world has yet to recover appreciably from the decline experienced in the early 1980s (Fig. 1).[5]

Gross capital formation in developing countries rose sharply in the late 1960s and early 1970s but declined in the 1980s. As the debt problem unfolded in the

Table 2. Developing countries: Growth of real GDP, 1969–86 [a] (in per cent)

			From preceding year							
	Weights	Average 1969–79[b]	1979	1980	1981	1982	1983	1984	1985	1986
Developing countries	100	5.0	4.3	3.4	1.5	1.5	1.6	4.1	3.3	4.0
Memorandum										
Median growth rates		5.3	4.8	3.5	3.0	1.6	1.6	3.0	2.8	2.9
By Region										
Africa	12	5.1	3.3	3.8	2.0	1.0	−1.6	1.4	2.1	0.8
Asia	32	5.8	4.5	5.4	5.5	5.2	7.6	7.9	6.4	6.3
Europe	11	5.9	3.9			1.1	1.9	4.0	2.4	3.5
Middle East	18	8.2	1.8	−2.5	−2.1	0.3	0.3	0.2	−1.1	1.2
Western Hemisphere	27	5.8	6.1	6.1	0.1	−1.0	−2.8	3.6	3.5	4.4
By predominant export										
Fuel exporters	31	7.8	3.7	1.0	0.8	0.1	−2.0	0.8	0.3	−0.1
Non-fuel exporters	69	5.4	4.5	4.3	2.0	2.4	3.4	5.7	4.7	5.8
Primary product exporters	33	5.2	4.8	4.9	0.5	0.4	−0.1	3.9	3.2	5.4
Exporters of manufactures	30	5.9	4.3	3.1	3.6	4.4	7.3	8.1	6.6	6.4
Service and remittance countries	6	4.8	4.4	4.2	2.1	3.3	2.9	3.3	4.2	4.3
Memorandum										
Fifteen heavily indebted countries	32	6.1	6.1	5.5		−0.5	−3.2	2.5	3.1	3.8
Countries with recent debt-servicing problems	44	5.5	5.3	4.2	0.1	−0.3	−1.9	3.0	2.7	3.5

[a] Except where otherwise indicated, arithmetic averages of country growth rates weighted by the average U.S. dollar value of GDPs over the preceding three years.
[b] Weights are calculated On the basis of the average U.S. dollar value of GDPS for 1982–84.
[c] Compound annual rates of exchange
Source: *World Book, Annual Development Reports.*

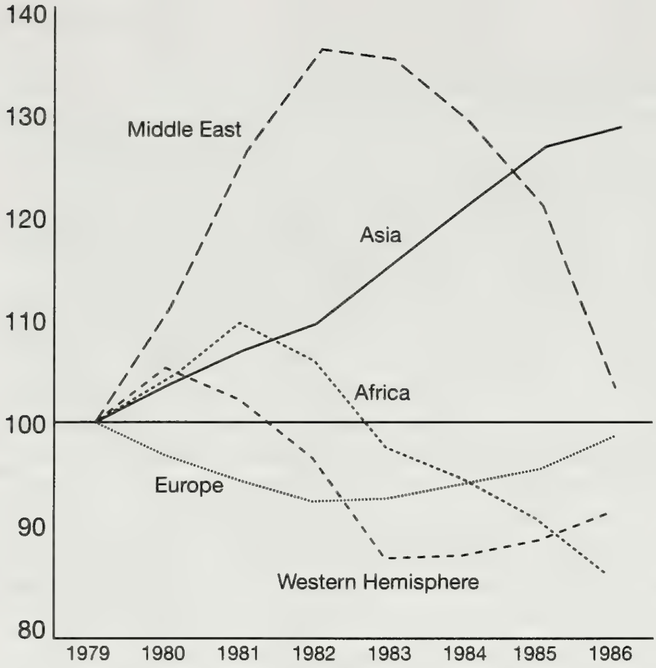

Fig. 1. Developing countries: real absorption per capita, by region 1979–86 (real GDP less the real foreign balance; indices, 1979 = 100). Source: The IMF Annual Reports.

1980s, a disproportionate share of the adjustment fell on investment rather than consumption, especially among highly indebted countries. As can be noted from Fig. 2, the decline in investment was sharpest in Africa, the developing countries in Europe, and the Western Hemisphere – the regions with highest debt ratios. Moreover, developing countries have not succeeded in improving markedly the efficiency of their investments due mainly to the management constraint.[6]

The inflation performance of developing countries in the 1980s has been quite disappointing in relation to the success of industrial countries in steadily restraining rates of price increase. Inflationary pressures continued and sometimes intensified as demand management policies of some countries were not very effective and the supply response of the economy to the adjustment programs has been slow.

Developing countries have responded to the adjustment and growth problem with significant changes in their economic policies in the last few years. Nevertheless, as we enter the 1990s, developing countries as a group clearly have not recaptured the growth momentum required to restore the per capita consumption levels of the early 1980s. Some, through the pursuit of effective policies, have by and large avoided the crises of recent years. A few, after sustaining significant declines in income and output, have been able to restore their growth momentum. For too many others, however, the adjustment process remains incomplete. Moreover, a great deal of the adjustment that has taken place has involved severe compression of investment and imports with detrimental consequences for future growth.

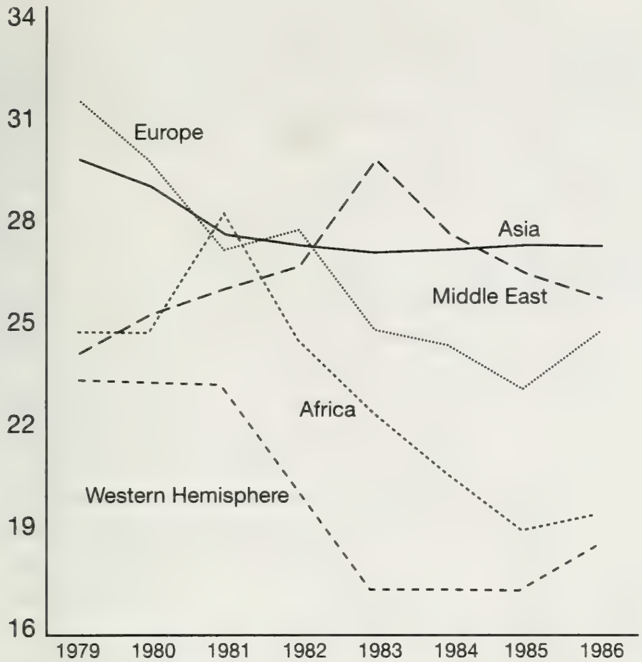

Fig. 2. Developing countries: gross capital formation, by region 1979–86 (in per cent of nominal GDP). Source: The IMF Reports.

Table 3. Developing Countries: Changes in consumer price, 1969–86 (in per cent)

		From preceding year							
	Average 1969–78[a]	1979	1980	1981	1982	1983	1984	1985	1986
Developing countries[b]	16.3	21.1	26.6	26.0	26.0	33.2	38.1	39.7	29.5
By region									
Africa	11.6	16.6	16.4	21.9	11.4	19.4	20.3	12.8	13.7
Sub-Saharan Africa[c]	13.4	26.3	25.2	32.2	13.4	30.4	22.4	17.8	19.3
Asia	8.7	8.0	13.1	10.7	6.3	6.5	7.2	7.6	7.8
Europe	10.8	22.2	31.1	23.6	34.8	22.9	25.1	25.2	24.9
Middle East	10.9	11.7	15.8	15.2	12.7	12.3	14.8	12.2	1.7
Western Hemisphere	31.0	46.6	54.4	59.2	68.0	105.9	128.5	151.1	89.5
Medians									
Developing countries	9.1	11.5	14.6	13.4	10.3	9.4	10.4	8.7	8.2
By region									
Africa	9.1	11.9	12.5	13.7	12.6	10.9	11.2	10.5	9.0
Sub-Saharan Africa[c]	9.3	12.5	13.3	13.5	12.7	11.2	11.2	10.5	9.2
Asia	7.2	7.5	13.9	12.5	7.6	8.1	7.0	4.9	5.7
Europe	8.1	9.6	15.8	20.0	21.0	20.2	15.0	15.1	11.7
Middle East	10.0	10.6	10.5	8.9	9.1	5.2	5.4	4.3	10.0
Western Hemisphere	10.4	14.9	18.1	14.7	9.0	8.8	12.0	15.0	11.4

[a] Compound normal rates of change.
[b] Arithmetic averages of country consumer price increases weighted by the average U.S. dollar value of GDPs over the preceding three years.
[c] Excluding Nigeria and South Africa.
Source: IMF Reports.

The main focus and content of domestic policy reform designed to promote sustainable growth in developing countries will determine the demand for accounting information and shape the pattern of accounting development in the 1990s. Theoretical and empirical evidence suggest that domestic policy reforms should aim at:

1. The restoration and maintenance of macroeconomic balances;
2. Raising the overall efficiency and factor productivity;
3. Raising savings relative to consumption;
4. Restructuring production in favor of tradeables.

Macroeconomic imbalances, in the sense that the aggregate demand for resources exceeds the amounts of resources available, manifest themselves in high and unpredictable inflation and periodic balance of payments crises. Inflation is itself a source of resource misallocation and an impediment to growth. Inflation is inimical to raising the savings rate and to channelling savings to productive investment. Periodic balance of payments crises result in cycles of expansion and contraction of economic activity which adversely affect investment and long-term economic growth. Monetary, fiscal, and exchange rate policies are the three main instruments of a stabilization program aiming at reducing and correcting the imbalances. Such programs are usually supported by IMF Standby Arrangements.

The key issue for adjustment and growth is to find the combination of the three macroeconomic policy instruments that will, for any given level of external finance, attain stabilization objectives while also being the most supportive of future structural adjustment and the least disruptive to growth. The whole burden of stabilization must not be borne by monetary policy, as it is more likely that long-term growth objectives will be adversely affected. This is because monetary policy will have to be so restrictive as to result in real interest rates high enough to crowd out interest-sensitive components of aggregate demand and especially private investment.

Stabilization alone does not guarantee growth. The specific components of a policy package that will induce structural change and growth will vary from country to country, depending on its current situation and existing policies, and on the international environment and its future prospects. Recent reviews of the situation in many developing countries, however, suggest that the accounting profession response to the needs of economic change has been nil or at best quite inadequate. Financial accounting and reporting for performance evaluation provide distorted picture as the undertyping data are the outcome of the macro imbalances. Therefore, decisions based on such reporting and the resulting allocation of resources will tend to intensify the imbalances and distortions in the economy (e.g., the divergence between the financial and economic profitability). Supplementary data to assess performance are needed whether for the public or private sector decision makers. The introduction of value-added statements on the basis of international prices for inputs and outputs may be useful in enhancing the efficiency and resource allocation in many developing countries.

More resources can be mobilized for development by raising public savings through reductions in government expenditures and/or increases in revenues. Significant deficits persist in many countries and there is considerable scope for the reduction

of government expenditures without adversely affecting economic growth and distribution objectives. The proper costing of government services and the institution of cost recovery systems – particularly in the area of urban services – represent another area where the accounting profession could play a key role. Public enterprises continue to absorb resources in several countries. Public sector performance can be improved through better public enterprise management, improved pricing policies, and in some cases, the privatization or closing down of inefficient public enterprises. Savings can also be achieved by better targeting of government support programs (e.g., food subsidies) to the groups that truly need them. No progress can be made in these areas without the development of the accounting function to serve the operational needs of the stabilization and growth policies.

Conclusion

Structural change is the essence of development. Adjustment to changing domestic and international circumstances is a continuing challenge for all countries. The response of the accounting profession to the needs of the adjustment process is critical for its success. The experience of the industrial countries over the past few decades suggests that the accounting function would continue to be adaptable and dynamic. However, for the developing countries the accounting function appears to be not fully integrated with the changing economic scene. As the 1990s represent the decade of adjustment and growth, accounting needs to develop the capacity to serve the needs of decision makers in such areas as performance evaluation, debt management, costing of services, financial and capital markets development.

Notes

1. See for example: Baruch Lev, "Toward a Theory of Equitable and Efficient Accounting Policy," *The Accounting Review*, LX III (January 1988), pp. 1–22.
2. H. T. Johnson, and R. Kaplan, *Relevance Lost: The Rise and Fall of Management Accounting* (Boston, Massachusetts: Harvard Business School Press, 1987).
3. Ibid, pp. 1–3.
4. Ibid, pp. 227–262.
5. The International Monetary Fund Annual Report, 1987, p. 12.
6. The IMF Annual Report, p. 13.

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An Examination of the Accuracy and Bias of Prospectus Earnings Forecasts: UK Evidence

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Key words: Accuracy; Bias; Prospectus; Earnings; Forecast; Time series

Abstract: *This paper investigates, and extends earlier work [Dev and Webb (1972), Ferris and Hayes (1977) and Mak (1989)], on the accuracy and bias of prospectus earnings forecasts (PEFs) disclosed prior to an unseasoned issue of common stock. A number of important findings emerge. First, the accuracy of PEFs are shown to be significantly higher than for competing time series forecasts, with both types of forecast generally underestimating future earnings. Second, results suggest that the accuracy levels of the PEFs decline the longer the time horizon of the forecast and the higher the quality (cost) of the advising agents chosen to audit and validate the PEF.*

Earnings forecasts have been a topic of interest in the accounting and finance literature for some time. Early studies were mainly concerned with forecast accuracy [for example, Daily (1971), Copeland and Marioni (1972), McDonald (1973), Ruland (1978)]. These were followed by studies analyzing the information content of earnings forecasts [Foster (1973), Patell (1976), Beaver et al. (1979), Ajinka and Gift (1984)].

A small part of the earnings forecast literature has considered the accuracy of forecasts provided in the prospectuses of firms seeking an initial listing of their common stock [see Dev and Webb (1972), Ferris and Hayes (1977) and Mak (1989)]. This paper extends this literature to form an overview of the predictive power of prospectus earnings forecasts (PEFS). For investors and analysts using the PEFs, an indication of the accuracy and bias of the forecasts is clearly helpful in understanding their predictive power. The importance of the accuracy of the PEFs, in this respect, seems to be well understood in the literature. However, the lack of detailed information concerning the levels of bias of PEFs in the current literature, is somewhat surprising given that information on the bias levels of PEFs, may be valuable to forecast users.

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If, for example, the bias levels of PEFs are well defined, the user of the forecast may be in a position to adjust the forecast and hence increase its perceived predictive power. Taking into account the above comments, three areas of analysis focusing on the accuracy and bias of PEFs are identified in this paper for a sample of firms issuing unseasoned common stock on the Unlisted Securities Market (USM) in the UK.

The first area analyzed, documents the actual levels of bias and accuracy of the PEFs. The second area of analysis evaluates the bias and accuracy of the PEFs, in relative terms, by comparing them with bias and accuracy levels of alternative time series forecasts of earnings. The final area of investigation offers a more complete examination of the factors determining the accuracy of PEFs, and allows a comparison of these determining factors to be made with those reported in earlier studies [see Ferris and Hayes (1977) and Mak (1989)]. In contrast to previous studies, the roles of the original entrepreneurs and advising agents in formulating the PEFs are considered for this area of investigation.

This paper is organized into four sections. Section 1 of the paper provides a background to the formation of the PEFs and outlines the data to be used. Section 2 then provides measures of the accuracy and bias of the PEFs and evaluates these accuracy and bias measures for the PEFs by comparing the measures to those produced from time series forecasts of earnings. Section 3 of the paper develops hypotheses to explain the accuracy of the PEFs and the final section presents empirical results and draws conclusions.

Section 1. The Formation of Prospectus Earnings Forecasts (PEFs) and the Data Used

The Formation of PEFs

For companies wishing to enter the Unlisted Securities Market (USM) in the UK there is no binding obligation for the prospectus prepared for the new issue to contain an earnings forecast. The USM simply requires a statement of the financial and trading prospects of the company to be included in the prospectus document when a flotation is sought. In general, however, a large proportion of companies going to the USM provide an earnings forecast. The prospectus itself is prepared a number of weeks prior to the flotation date and conveys data relating to the terms of issue (including the offer price), past company performance and the future earnings potential of the company. This paper focuses on this last element of prospectus data.

The prospectus forecast is formulated by the entrepreneurs /directors of the company prior to flotation. The forecast represents earnings before taxation and extraordinary items. This is then ratified by a number of advising agents to the issue; of particular relevance here are the sponsor and reporting accountant to the issue. A letter is required in the prospectus from the reporting accountant validating the procedures adopted by the directors/entrepreneurs in arriving at the forecast, with the sponsors in turn providing a supporting letter enclosing the due diligence of the directors/

entrepreneurs in preparing the forecast. As a consequence, the entrepreneurs of the firm, reporting accountants and sponsors have responsibilities and reputations at stake when formulating and validating a prospectus forecast.

Finally, companies seeking a flotation on the USM, since its inception in November 1980, have generally been relatively small companies with short business histories. As a consequence, the forecasts of future earnings disclosed have the potential to provide a considerable amount of information to forecast users. Within this framework, information on the accuracy and bias of the PEFs is clearly important.

Data Used

The sample frame for the investigations performed in this paper is drawn from placement flotations on the USM, in the UK, for the years of 1984, 1985, and 1986. Only placements[1] as a method of flotation are considered because they formed the majority of flotations during the period of interest (over 80% of flotations in this period were by placement). Different methods of flotation also give rise to different costs, and since flotation costs will be used as one measure of the quality of the advising agents ratifying the original entrepreneurs' PEFs, only one method of flotation is considered. In total, there were 228 placements on the USM during the years of 1984, 1985, and 1986. This sample frame is reduced to 194 companies because of missing data and of these 194 companies, 122 companies voluntarily disclosed a PEF. The data sources used for the investigations in this paper are the *Peat, Marwick, McLintock Quarterly Survey of the USM, the Hoare Govett Annual Directory* of the USM and the *Extel Financial Service*.

Section 2. The Measurement of the Accuracy and Bias of Earnings Forecasts

Measurement of the Forecast Accuracy and Bias of PEFs

Each PEF gives an estimate of the earnings for an accounting year that terminates at the first accounting year-end post-flotation. Comparing actual earnings figures for this accounting year-end with the PEFs gives one indication of the accuracy and bias of the PEFs. Previous studies [See, Cragg and Malkiel (1968), Daily (1971), Neiderhoffer and Regan (1972), Elton and Gruber (1972), Copeland and Marioni (1972), McDonald (1973), Basi et al. (1976), Ruland (1978), Brown and Rozeff (1978), Fried and Givoly (1982), Imhoff and Pare (1982), and Cox (1985)] have employed several different error measures to evaluate the accuracy and bias of forecasts. As there is no obvious single measure and, since Imhoff and Pare found their results to be insensitive to the error metric used, the form of the earnings forecast errors adopted is as follows:

$$\frac{\text{Actual earnings} - \text{Forecast earnings}}{\text{Forecast earnings}}$$

If the above is taken as it stands, it measures the bias of a forecast. Taken in absolute form it measures the accuracy of a forecast. However, these measures also need to be applied to other forecasts if PEFs are to be fully evaluated. The obvious benchmark to adopt is the best alternative forecast available from using past earnings data.[2] One possible forecast would be one which uses the last available earnings figure for a company pre-flotation. Assuming a Martingale process this becomes the forecast for earnings for the year terminating at the first accounting year-end following flotation (referred to as the RWALK forecast). An extensive literature exists supporting the use of such random walk earnings forecasts [for example, Beaver (1970), Ball and Watts (1972), Watts and Leftwich (1977) and Albrecht et al. (1977)].

A second alternative forecast is obtained by taking the last available earnings figure before flotation and adding on a drift term. Given the growth potential of companies going for a USM listing, this second forecast is expected to be more accurate than the random walk forecast. The drift term is defined as the average growth in earnings over three years of earnings figures pre-flotation (referred to as the TREND forecast).

Having derived the alternative forecasts, earnings forecast errors can be determined as described above and then compared. The three types of earnings forecast error variables outlined are summarized as follows:

EPR: Defined as actual earnings at the accounting year end following flotation less the earnings forecast contained in the prospectus (PEF), all divided by the PEF.

ERW: Same definition as EPR, except replace the forecast with the RWALK forecast; the last available earnings pre-flotation.

ETR: Same definition as EPR, except replace forecast with the TREND forecast. TREND = $P_1 + (P_1 - P_3)/2$, where P_1 = last reported-earnings before floatation and P_3 = reported earnings two years prior to P_1.

Earnings Forecast Accuracy and Bias: Descriptive Statistics

For the earnings forecast error variables, two extreme outliers were truncated to the mean of the series without the inclusion of the outliers. As is usual practice [see Fried and Givoly (1982)] this truncation of the distribution of the variables was introduced to avoid distortions and suppress data measurement errors.

Part (a) of Table 1 presents a summary of the forecast errors. Almost without exception the figures for EPR are closer to zero than those for the other two forecasts. Part (b) of Table 1 presents summary measures and statistical tests of the differences of the bias and accuracy between the various forecasts. In terms of the statistical tests, it is now accepted that the parametric paired t-test is inappropriate by itself for testing mean error differences of forecast methods applied to cross-sectional earnings data [see, for example, Brown and Rozeff (1978)]. Given this, the Wilcoxon Matched Pairs Signed Ranks test is used as an additional check. This test statistic is recommended because it is relatively insensitive to error definition and outliers.

Part (b) of Table 1 indicates that the earnings forecast errors associated with the prospectus forecast errors (EPR) are not statistically less biased than the TREND

Table 1. Earnings forecast errors arising from the use of the PEF, TREND and RWALK forecasts

Part (a)	Cases	EPR	ETR	ERW
	1–10	−0.04	−0.18	0.11
	11–20	0.04	−0.13	0.19
	21–30	−0.02	−0.07	0.14
	31–40	0.05	0.45	0.74
	41–50	0.05	−0.06	0.28
	51–60	0.05	0.12	0.53
	61–70	0.04	0.23	0.61
	71–80	0.08	−0.05	0.30
	81–90	0.16	0.13	0.51
	91–100	0.04	0.23	0.32
	100–110	0.10	0.34	0.69
	110–122	0.14	−0.08	0.28
Mean		0.05	0.09	0.40
Standard deviation		0.19	0.61	0.76
Sum of absolute deviations		13.31	45.98	64.13

Part (b)	EPR	ETR	ERW
1. (Bias) All cases			
Mean	0.05	0.09	0.40
S.D.	0.19	0.61	0.76
Paired t-tests (Difference between means)		−0.69	−3.51*
2. (Accuracy) All cases			
Mean	0.11	0.38	0.53
S.D.	0.16	0.49	0.67
Paired *t*-tests		−5.76*	−1.98*
3. Cases of positive errors			
Number	110	63	97
Mean	0.09	0.49	0.60
S.D	0.10	0.63	0.71
Paired *t*-tests		−4.96*	−1.02
4. Cases of negative errors			
Number	12	59	25
Mean	−0.28	−0.59	−0.31
S.D.	0.37	0.27	0.42
Paired *t*-tests		0.10	0.22

Wilcoxon Matched Pairs Signed ranks test for bias metric	
EPR with ERW	$Z = -6.1432$*
ETR with ERW	$Z = 8.7745$*
EPR with ETR	$Z = 1.5124$

* Denotes significance at the 5% level.

forecast but both of these are statistically less biased than the RWALK forecast However, all three types of forecast exhibit positive bias (they generally underestimate future earnings). These t statistics results are supported, as were all the others, by the more robust Wilcoxon Matched Pairs Signed Ranks test. According to the null hypothesis, the sum of positive differences between two types of forecast errors is equal to the sum of negative differences. The test results show that the alternative hypothesis holds when comparing EPR with ETR and ETR with ERW. That is, EPR and ETR are significantly less biased than ERW at the 5% level. However, the null hypothesis cannot be rejected when comparing EPR with ETR.

In terms of the absolute measure of error (accuracy), the PEF is statistically more accurate than the RWALK and TREND forecasts. For the positive errors of the forecasts, the statistics indicate that the PEF underestimates actual earnings significantly less than the other forecasts. However, for the negative errors, the t statistics indicate that the PEF does not significantly overestimate more than the other forecasts. The results, therefore, indicate that in general the prospectus forecast is no more biased than competing time series forecasts, but is significantly more accurate. This result adds further support to the view that 'expert' prepared forecasts can significantly out-perform time series model forecasts [see Brown and Rozeff (1978), Collins and Hopwood (1980), Brown et al. (1987)]. This view, however, does not receive unanimous support in the accounting and finance literature [for instance, see Cragg and Malkiel (1968), Elton and Gruber (1972), Ruland (1978) and Imhoff and Pare (1982)].

Section 3. Determinants of the Forecast Accuracy of PEFs

This section highlights a number of possible determinants of the accuracy of PEFs. As the various determinants are summarized in Table 2, they are only briefly described in the text here.

In the formulation process of the PEF, the pre-offering entrepreneurs of the firm are responsible for preparing the PEF which is duly audited by the reporting accountant to the issue and then validated by the sponsor to the issue. Given this process, it is important to quantify the roles of the pre-offering entrepreneurs and advising agents (reporting accountant and sponsor) to the new issue. For the pre-offering entrepreneurs, the percentage of equity retained in the new issue may be important. It is conceivable that, at lower equity retention levels, entrepreneurs may attempt to inflate their PEFs so as to maximize the funds raised from selling their business interest. Furthermore, the entrepreneur who retains less equity may be less concerned with adverse reputation effects on any secondary issues of equity. As a consequence, an inverse relation may exist between the absolute earnings forecast errors and equity retention levels. However, the existence of advising agents to the forecast, notably the reporting accountant and sponsor, may limit the actions of the pre-offering entrepreneurs in this respect.

In terms of the advising agents, it is helpful to distinguish between higher and lower quality agents where quality may be defined in terms of expertise or reputation. For higher quality agents, it is not clear *a priori*, whether such agents are likely to support the revelation of more information in PEFs than lower quality agents. However, higher quality agents may be more cautious than lower quality agents because of the possible loss in value of their reputational capital through the incidence of negative earnings forecast errors. As a consequence, a positive relation may exist between advising agent quality and the accuracy measure (AEFEs) of the prospectus forecasts. An alternative argument would suggest that higher quality agents are more adept at predicting future performance than lower quality agents given their comparative advantage in terms of experience and resources.[3] This argument would suggest an

Table 2. Variables used for the explanation of the accuracy of the PEFs

Dependent variable	
Accuracy measure = |EPR| = AEFE	
Independent variables	
Entrepreneurial variable	
RE	Percentage of equity retained in the new issue by the pre-offering entrepreneurs in the firm
Advising agent variables	
SPON	A dummy variable according a value of 1 to a high quality sponsor and a value of 0 to low quality sponsor
ACC	A dummy variable according a value of 1 to a big 11 reporting accountant used at flotation and a value of 0 to a non-big 11 reporting accountant used
MERCH	A dummy variable according a value of 1 if the sponsor and broker to a new issue are different
FLOT	The costs of floating the new issue firm divided by the net proceeds raised from the new issue
Time horizon of forecast	
LF	Time horizon of forecast measured in months, elapsing between the flotation date and the accounting year end following the flotation
Specific risk variables	
IND	A dummy variable controlling for the industrial classification of the firm. A value of 1 being used for companies in manufacturing, textiles or industrial groupings. A value of 0 for companies in other sectors. Companies in manufacturing, textiles and industrials being viewed as having a higher risk of failure than companies in other sectors
AGE	The age of the company at flotation expressed in years
CV	Standard deviation of the 3 years of firm earnings figures immediately prior to flotation divided by the mean of the earnings figures
NA	Net assets of the firm at flotation (excluding net proceeds raised from the issue)
Economic conditions	
ΔGDP	Difference between the average quarterly growth in Gross Domestic Product (GDP) over the period of the forecast, and the average quarterly growth in GDP for the year immediately before the date of the new issue

inverse relationship between advising agent quality and the accuracy measure of the prospectus forecasts.

To model the quality of the advising agents to the PEFs, for new issues in 1984, 1985, and 1986, the period from the USM's inception in November 1980 to December 1983 is used to determine agent quality. Agent quality or reputation is measured in terms of past experience in the preparation of PEFs for the USM. Dummy variables are used to describe agent quality, where a value of 1 signifies agents of high quality and a value of 0 signifies agents of lower quality. As far as the sponsors (SPON) are concerned, a value of 1 is accorded to any sponsor that had involvement in three or more flotations on the USM prior to 1984.

In addition to the above, a MERCH variable is defined where an additional merchant banker is used to help the sponsor validate the PEF. For the reporting accountant (ACC) a big 8 non-big 8 split is established in terms of fee income. This dichotomy did not coincide with a split in the number of USM flotations dealt with by the reporting accountants prior to 1984. Instead, a big 11[4] is defined as being those reporting accountants who had both the highest overall fee income (*Accountancy*, 1983) and the most experience of flotations on the USM from its inception to the end of 1983. In addition to the advising agent dummy variables, flotation costs as a proportion of the net proceeds raised from the issue (FLOT) are used as a further measure of agent quality, given that an entrepreneur might be prepared to pay more, per pound of funds raised, for higher quality agents (Titman and Trueman, 1986).

The time horizon of the PEF is also hypothesized to be a determining factor of the accuracy of the PEFs. For PEFs with a longer time horizon, the scope for error is clearly larger. In view of this a positive relation may exist between LF and the accuracy measure of the PEFs. Additional factors of interest include the underlying risk of the firm from which the PEFs are derived. As the level of firm-specific risk increases, greater uncertainty can be attached to any forecast of future earnings and the forecast may therefore be discounted by the entrepreneurs and advising agents to the firm to reflect this uncertainty. As a consequence, specific firm risk measures may be positively correlated with the accuracy measure (AEFE) of the forecasts. The measures used to capture this specific risk are the industrial classification of the firm (IND), the age of the firm (AGE), and the coefficient of variation of past earnings (CV). Other control measures, such as the size of the firm (NA), control for the inherently greater risk associated with small firms.

Finally, following the arguments of Mak (1989), economic conditions over the time horizon of the forecast need to be controlled. Over the period of a forecast, changes in economic conditions can lead to significant shifts in the level of earnings from those forecast. As Porter (1982) notes, such a change in economic conditions is likely to have a negative effect upon the accuracy of forecasts. To control for changing economic conditions, the difference in the growth of quarterly GDP figures in the UK (expressed in constant pounds) over the time horizon of the forecast and the average growth in quarterly GDP figures over the year immediately before the forecast is calculated.

Section 4. Results

This section of the paper, presents the results of regressing the accuracy measure of the PEFs on a number of plausible determining factors described in Section 3. Table 3, Part (a) presents the correlation matrix of the variables used to explain the accuracy of the PEFs. From this correlation matrix it is clear that the variables used to explain the accuracy measures (AEFES) of the PEFs, do not suffer from serious multi-collinearity problems. In addition, the homoscedasticity assumption, implicit to the interpretation of the OLS Equation in Table 3, Part (b) is considered appropriate after testing.[5]

An examination of the bivariate statistics in part (a) of Table 3 indicates that the FLOT and LF variables are both significantly related to the accuracy (AEFE) variable at the 1% level. For the remaining explanatory variables, significant bivariate relationships with the AEFE variable cannot be detected. The regression equation in part (b) of Table 3 also suggests that the FLOT and LF variables are highly significant explanatory variables for the accuracy measure (AEFE variable) of the PEFs, at the 5% level. The remaining explanatory variables considered are not found to be significant at this 5% significance level.

The significant positive coefficient on the LF variable, representing the time horizon of the PEF, is in agreement with the hypothesis presented earlier that the parties responsible for formulating and validating the forecast may be even more cautious the longer the time horizon of the forecast (given that most of the forecast

Table 3. Bivariate and multivariate analysis of the determining factors of the accuracy of PEFs

Part (a) Correlation matrix

	AEFE	FLOT	AGE	CV	LF	RE	ΔGDP	NA
AEFE	1.00	0.79*	0.26*	0.06	0.32*	0.02	−0.06	−0.01
FLOT		1.00	−0.03	−0.01	0.19	0.07	−0.09	0.02
AGE			1.00	−0.09	0.02	−0.01	0.12	0.10
CV				1.00	−0.05	0.18	0.24*	−0.11
LF					1.00	−0.02	0.18	0.02
RE						1.00	0.02	0.06
ΔGDP							1.00	0.11
NA								1.00

* Indicates significance at the 0.01 level.

Part (b) Independent variables (dependent variable = AEFE (accuracy measure))

	B	*T* statistic	Significance level of *T* statistic
RE	−0.001	−0.726	0.470
SPON	−0.041	−1.191	0.240
ACC	0.032	0.920	0.360
MERCH	0.002	0.057	0.950
FLOT	0.095	2.629	0.010**
LF	0.017	3.654	0.000**
IND	−0.034	−0.993	0.320
AGE	0.001	0.281	0.780
CV	0.001	0.928	0.360
NA	−0.001	−0.596	0.550
ΔGDP	−0.207	−0.239	0.810

$R^2 = 0.23$, $F = 2.89$ (significance level = 0.002), $n = 122$
** Indicates two-tailed T statistics significant at the 5% level.

errors from the PEFs are positive). Even if such caution is not displayed, the scope for forecast error can still be seen as an increasing function of the time horizon of the forecast.

The significant positive coefficient on the FLOT variable, in the empirical results, is also in agreement with the presented hypotheses. Given the positive significance of this variable, the suggestion is that higher quality (or more expensive) agents tend to err on the side of caution (given that the majority of the earnings forecast errors are positive). However, the lack of support for the ACC, SPON, and MERCH dummy variables may provide a question mark against this interpretation of the FLOT variable. A possible explanation for the lack of support for the separately measured advising agent variables may be because of the technology used in measuring advising agent quality. The use of categorical measures of quality may not readily capture the individual agent qualities or their joint effects. Nonetheless, the use of categorical measures represents an initial step in proxying for advising agent quality.

The lack of significance of the RE variable in Table 3 suggests that the pre-offering entrepreneurs to the issue are not necessarily motivated to inflate the PEFs at low levels of equity retention as is suggested in Section 3. In addition, the lack of significance of the risk measures (IND, AGE, CV) also suggests that firm specific risk is relatively unrelated to the accuracy of the prospectus forecasts. This is also the case for the firm size variable (NA) and the variable proxying for the general

economic conditions taking place over the time horizon of the prospectus forecast (ΔGDP).

The results, therefore, suggest that the time horizon of the PEF and the proxy measure for advising agent quality (FLOT) receive support. Previous work examining the determinants of the absolute earnings forecast errors (accuracy) of PEFs, notably Mak (1989), also reveal support for the LF variable as a determinant of forecast accuracy. However, the quality of the advising agents to PEFs have not been explicitly modelled in prior studies. Consequently, the results for the advising agents represent one of the novel features of this study.

The present results also mirror Mak's finding that the accuracy of PEFs is unrelated to the industry of firms and their size. Where the studies differ, however, is that in the present study, forecast accuracy is not related to the change in economic conditions over the time horizon of the forecast. Finally, the results in this study also contrast with those presented by Ferris and Hayes (1977) where significant determinants for the accuracy measure of PEFs could not be identified.

Conclusions

This paper examines the accuracy and bias of prospectus earnings forecasts (PEFs) for firms preparing to 'float' on the Unlisted Securities Market (USM) in the UK. Relatively little work has been devoted to this issue, although Dev and Webb (1972), Ferris and Hayes (1977), and Mak (1989) provide some background on the accuracy of PEFs. This paper offers a more extensive analysis than the existing literature in three important ways. First, the bias as well as the accuracy of PEFs are considered. Second, the accuracy and bias of PEFs are compared to similar measures for time series forecasts. Third, a more extensive list of the determinants of the accuracy of PEFs is analyzed.

The first stage of analysis finds that PEFs, for new issuing firms, are generally conservative estimates of future earnings. Comparison of such forecasts, however, with other competing time series forecasts reveals that the PEFs, despite their conservative nature, are not subject to significantly more bias than the competing time series forecasts under scrutiny. Moreover, the PEFs are shown to be significantly more accurate than the competing time series forecasts considered. This result adds supports to the view that 'expert' prepared forecasts can significantly out-perform time series model forecasts [see Brown and Rozeff (1978), Collins and Hopwood (1980), Brown et al. (1987)].

The final stage of analysis examines the determinants of the accuracy of the PEFs where this accuracy is expressed in terms of absolute earnings forecast errors (AEFEs). The results indicate that the accuracy measure is significantly and positively related to the time horizon of the forecast and to a proxy measure for the quality of advising agents chosen to validate the forecast and 'float' the new issue. For the advising agent proxy measure, the results suggest that higher quality agents are more cautious in preparing forecasts (given that the majority of PEFs were conservative estimates of earnings) possibly because of potential losses in reputational capital from the incidence of negative earnings forecast errors. Support for the time horizon variable

with respect to the accuracy of PEFs has also been documented by Mak (1989). However, the analysis of the advising agents, with respect to prospectus forecast accuracy, has not been documented elsewhere. In contrast to Mak (1989), the present results indicate no support for the hypothesis that the accuracy of forecasts is related to the change in economic conditions over the time horizon of the forecast.

Notes

1. In a placement, the shares are 'placed' by an issuing house/broker with the broker's clients at a fixed offering price.
2. The Box–Jenkins (ARIMA) method of forecasting time series data has desirable properties. However, since the majority of the firms in this study had short business histories it was not feasible to formulate such forecasts.
3. This argument is supported in DeAngelo (1981) and Healey and Lys (1986) where in the case of high quality audit firms, a strong incentive exists for such firms to provide high quality services (i.e., more accurate information disclosures) in order to maintain their investment in reputational capital and investor's perceptions of their expertise. This is important since higher levels of reputational capital yield higher rents. However, as noted earlier in this paper, the protection of reputational capital may lead agents to err on the side of caution.
4. The reporting accountants included in the Big 11 are: Peat Marwick and Mitchell; Deloites Haskins and Sells; Price Waterhouse; Coopers and Lybrand; Ernst and Whinney; Touche Ross; Arthur Young, McClelland and Moores; Thornton Baker; Arthur Andersen; Thomson McLintock; Binder Hamlyn.
5. The homoscedasticity assumption of the OLS regressions were checked as follows: first, the ratio of the sums of squared errors achieved from the OLS regressions using sub-samples from the population of 122 firms were derived. The sub-samples were determined by ranking the observations in terms of the continuous explanatory variables. The results suggested that the homoscedasticity assumption could be supported. See Theil (1971) for a discussion of this method.

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A Comparative Analysis of US and Taiwanese Firms' Decisions to Issue Earnings Forecasts

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Key words: Positive accounting theory; Management earnings forecasts

Abstract: *This study evaluates whether hypotheses of US management's earnings forecast decisions can explain similar decisions in Taiwan. It considers the applicability of positive accounting theories across national boundaries. A match-pair design is used to test the explanatory power of the hypotheses, on two forecast-release samples, one US and one Taiwanese. Both a univariate test and a multivariate test indicate that the hypotheses are more descriptive of management's behavior in the United States than in Taiwan. This leads to the conclusion that positive accounting theories have limited validity internationally because they are heavily dependent on the background institutions.*

Research Question

This study investigates whether positive accounting theories developed in one socioeconomic environment have comparable explanatory power in another socioeconomic environment. Positive accounting theories are hypotheses of managerial decisions regarding financial reporting choices.[1] The financial reporting choice of interest here is management's decision to release earnings forecasts voluntarily. In this context, the paper addresses whether hypotheses developed of managerial behavior in the United States are equally applicable in a different socioeconomic environment such as Taiwan.

The basic thesis is that positive accounting theories are products of economic, legal, and cultural forces. As these forces vary from one country to another, the explanatory power of the theories may be altered. Rather than painting a bleak

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picture of positive accounting theories, this study shows how such theories can be enriched and checked for external validity when the assumptions of the background institutions are varied. Thus, an intended contribution of this study is to highlight the importance of institutional backgrounds when applying positive accounting theories in different environments. The specific focus of this study is management's behavior in regard to earnings forecast releases. Numerous analytical and empirical studies have investigated why some US firms issue such releases and others do not. The same question can be asked of Taiwanese firms, since some of them do release such forecasts and others shy away from doing so. What this paper attempts to determine is whether the same theories for explaining the behavior of US firms have comparable explanatory power when applied to Taiwanese firms.

One reason for choosing these two countries for a comparative analysis is that there are sharp contrasts between the two environments, in terms of securities laws, institutions of security trading, ownership structure of firms, etc. Moreover, earnings forecasts by Taiwanese firms has been a subject of much attention in recent years. Since the 1986 stock market boom in Taiwan, the Taiwanese Security Administration Commission has been concerned with the level of speculation in the market. One of the measures considered by the Commission to deal with the speculation was to regulate earnings forecasts by management. Eventually, in December 1989, the Financial Accounting Standards Committee, a delegated organization of the Commission, issued guidelines for such management forecasts. To be implemented in 1991, these guidelines would leave management the discretion whether or not to release earnings forecasts.[2] Thus, why some Taiwanese firms decide to issue earnings forecasts voluntarily while others decide otherwise is an interesting research question in its own right. Therefore, an additional purpose of this research is to determine the extent to which existing theories of US managers can explain similar behavior in Taiwan.

The results basically confirm our expectation that positive accounting theories are not readily applicable across national boundaries. The methodology is a match-pair design tested via both a univariate analysis, where the prediction of each existing theory is evaluated, and a logit analysis, where the joint explanatory power of the theories is evaluated.

The next section reviews the various positive theories that attempt to explain why some US firms choose to release earnings forecasts voluntarily. The third section discusses the paper's hypotheses based on the differences between the US and the Taiwanese environments. The fourth section describes the methodology and data. The fifth section presents the test results, and the last section concludes.

Theories Explaining Firms' Decisions to Issue Earnings Forecasts

Why do some firms issue earnings forecasts voluntarily and others do not? This section summarizes seven theories that have been put forth in the literature.

1. *Agency cost theory.* When a business is run by managers who are not owners, the managers do not always act in the best interest of the firm. This is the essence of the agency cost theory.[3] One of the components of agency cost is the cost to monitor the manager. It has been argued that earnings forecasts are a relatively cost-effective monitoring device.[4] Thus, by voluntarily issuing such forecasts, managers can help reduce the firm's agency cost to the benefit of all parties who have an interest in the firm. By this theory, one would predict that firms burdened with large agency costs are more likely to issue earnings forecasts. Since firm size is usually viewed as positively correlated with agency cost,[5] the agency cost theory would predict *that large firms are more likely to issue earnings forecasts.* This prediction statement will be referred to as P_1 below.
2. *External capital theory.* Previous research finds that large firms with greater reliance on external capital are more likely to release insider information voluntarily.[6] Earnings forecasts by management is one form of insider information. Thus, firms seeking external capital are more likely to issue earnings forecasts. voluntarily, which is in keeping with the finding of a survey by Francis Lees.[7] Based on these findings, one would predict *that the firm's likelihood to issue earnings forecasts in a particular period is positively correlated with the amount of new external capital raised during the period* (P_2).
3. *Signaling theory.* A buyer possesses less information on a product than the seller. Hence, the seller has an incentive to offer the buyer more information in order to induce the buyer to buy. Since management has insider information on the firm, issuing earnings forecasts can be said to serve a similar purpose of reducing the information asymmetry between the firm and the buyers of the firm's securities.[8] However, the most that can be achieved by issuing bad news is to confirm the market's negative expectations about the firm. Thus, firms tend to issue good news more frequently and more speedily than bad news. This hypothesis has found to be consistent with existing empirical findings.[9] Therefore, the signaling theory would predict that *firms with good news to report are more likely to issue earnings forecasts* (P_3).
4. *Disclosure cost theory.* One of the skills investors prefer managers to have is the ability to anticipate changes in the firm's economic environment and to make adjustments accordingly. Brett Trueman maintains that this ability is factored into the market value of the firm.[10] This suggests that managers have every incentive to issue forecasts and to update them continuously because this would demonstrate their ability to collect and process future-oriented information. On the other hand, however, such releases can hurt the firm's competitive position if competitive information is revealed to rival firms. So a prudent manager would balance the market-value gain from disclosing and the competitive loss from doing so. All else being the same, therefore, firms with lower competitive costs are more likely to issue forecasts. Since competitive cost is negatively correlated with market power, this theory would predict *that firms with a large market share are more likely to issue earnings forecasts* (P_4).
5. *Expectation adjustment theory.* Expectations as to the firm's performance are formed in the market, as represented by earnings forecasts prepared by security

analysts. Existing evidence shows that management is motivated to issue earnings forecasts in order to correct the market's expectations if such expectations are either overly optimistic or overly pessimistic.[11] Thus, the expectation adjustment theory would predict *that the likelihood for firms to issue earnings forecasts is positively correlated with the magnitude of forecasting errors committed by security analysts* (P_5).

6. *Managerial influence theory.* Existing evidence shows that security analysts often revise their previously issued forecasts of a firm after the firm's own forecast is released.[12] One can therefore argue that management has more incentive to issue forecasts if such forecasts are more influential in the market's expectation formation. By this theory, one would predict *that a firm's tendency to issue earnings forecasts is correlated with analysts' revision of their previous earnings predictions* (P_6).
7. *Earnings variability theory.* According to empirical evidence, firms that release earnings forecasts voluntarily usually have lower variability in their earnings.[13] An obvious reason is that future earnings can be predicted more accurately if the earnings process is more stable. Conversely, firms with unstable earnings are less likely to issue earnings forecasts for fear that inaccuracies of such forecasts at hindsight could bring about adverse legal consequences. Therefore, this theory would predict *that firms with low earnings variability are more likely to issue earnings forecasts* (P_7).

In summary, the seven predictions, referred to concisely as P_1 to P_7 result in the following function mapping seven explanatory variables to the probability that a firm will issue earnings forecasts:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7) \qquad \text{Eq. (1)}$$

where Y is the probability to issue earnings forecasts, $f(\cdot)$ is the mapping function, and X_i is the independent variable in prediction statement P_i.

Testable Hypotheses Due to US–Taiwan Environmental Differences

Table 1 lists a number of differences between the environments of the two countries. In spite of a continuous stock market boom since 1986, Taiwan's security market institutions are still at a developing stage. This lack of maturity is particularly evident when such institutions are contrasted with their US counterparts. The following sets forth a number of testable implications from these contrasts.

First, Taiwanese corporations tend to be more family owned as opposed to publicly owned. This implies that managers and owners are less likely to be different parties pursuing conflicting goals. Consequently, agency cost is lower for the average firm in Taiwan. All else being equal, therefore, one would expect firm size, a surrogate for the level of agency cost, to be less predictive of management's tendency to issue earnings forecasts. Thus, we hypothesize *that prediction statement P_1 is less descriptive in the Taiwanese environment than in the US environment.*

Table 1. Key environmental differences between US and Taiwanese firms

Characteristics	United States	Taiwan
Corporate ownership profile	Public	Family
Investor profile	Institutional	Individual
Security analysis industry	Mature	Developing
Legal liability due to incorrect management-issued information	Limited but exists	None

This difference in corporate ownership structure has yet another empirical implication. The external capital theory predicts that management is more likely to issue earnings forecasts when they want to raise capital through the capital market. While publicly placed securities are a crucial source of long-term financing for publicly owned firms, family owned firms are more likely to place securities privately. Since the average source of financing is different in the two environments, one would expect the external capital theory to be less applicable in the Taiwanese environment. Therefore, we hypothesize *that prediction statement* P_2 *is less applicable to Taiwanese firms than to US firms.*

Second, investor profile also differs in the two countries. Institutional investors play a significant role in making security investment decisions in the United States. This would imply that security investment decisions in the United States are, to a large extent, shaped by professional managers. To deal with questions about accountability and fiduciary duties, professional managers are more likely to follow a methodical investment process, including the use of future-oriented information, such as earnings forecasts, in making the investment decision. But this is not equally the case in Taiwan, where individual investors dominate investment decision making. This difference would imply that earnings forecasts are not perceived to be equally useful in the two countries. If earnings forecasts are perceived to be less useful, as it is in Taiwan, one would expect their supply to fall, including the supply by management. Thus, all else being equal, the signaling theory about management release of earnings forecasts has reduced explanatory power in the Taiwanese environment. In short, we expect *prediction statement* P_3 *to be less descriptive in the Taiwanese environment than in the US environment.*

Additionally, the difference in investor profile has critical implications for the disclosure cost theory. Management's ability to make forecasts and to adjust the firm's operations accordingly critically hinges on investors' having the capacity to process this information. With resources at their disposal, professional managers can be expected to perform such a task. Lacking similar economies of scale, however, individual investors are expected to be less successful in doing so. We therefore hypothesize *that prediction statements* P_4 *is less descriptive in the Taiwanese environment than in the US environment.*

Third, the security analysis industry is much less well developed in Taiwan than it is in the US.[14] In the US, on the other hand, security analysis was a highly mature industry. This difference suggests that professionally prepared security analysis in Taiwan lacks the same degree of depth and breadth possessed by its US counterpart. This implies that management forecasts in Taiwan have more influence on the market's expectation formation and adjustment. Accordingly, we expect *prediction statements*

P_5 and P_6 to be valid descriptions of management forecast behavior in the Taiwanese environment.

Finally, the difference in potential legal liabilities regarding management forecasts also has a bearing on management's tendency to issue such forecasts. Because of a safe harbor rule, US firms are protected to a degree from potential litigations when forecasts made in good faith later prove incorrect. Yet, such legal liabilities do not vanish completely. This contrasts the Taiwanese environment where such legal liabilities are absent. The earnings variability theory hinges on the assumption that such legal liabilities do exist. When such liabilities are absent, there is no basis to suggest that firms with lower earnings variabilities are more likely to issue forecasts. Therefore, we hypothesize that *prediction statement P_7 is less powerful an explanation of the behavior of Taiwanese firms.*

In summary, this section argues that, although the prediction function as given in Equation 1 may be descriptive of US firms' behavior, it is not expected to have comparable explanatory power when applied to Taiwanese firms, X_4 and X_5 being the only exceptions. These hypotheses of the study are evaluated empirically below.

Methodology and Data

In accordance with the overall hypothesis, the empirical analysis evaluates how well model (1) discriminates forecast-release firms from non-release firms in both the US and the Taiwanese environments.

Test Designs

For each environment, two samples of firms are selected. Release firms are the treatment sample and non-release firms the control sample. If P_1 to P_7 explain the managerial behavior in question, then one would expect X_1 through X_7 to be good descriptors of the release firms *and* poor descriptors of the non-release firms. Both a univariate and a multivariate test are used.

Univariate Test: A release firm will be assigned a value of 1, and a non-release firm a value of 0. That is, the dependent variable Y in Equation 1 will be a dichotomous variable. The univariate analysis correlates each X_i, $i = 1,\ldots,7$, with Y. The point biserial correlation is used, which is calculated as:[15]

$$r_{X_iY} = [(X_i^{R} - X_i^{N})/S_{X_i}]\sqrt{pq} \qquad \text{Eq. (2)}$$

where r_{X_iY} = correlation between X_i and Y
X_i^R = average of X_i for the release firms
X_i^N = average of X_i for the non-release firms
S_{X_i} = standard deviation of X_i
p, q = proportion of release and non-release firms, respectively.[16]

A statistically significant r_{X_iY} indicates that X_i is a good descriptor of the decision to issue forecasts. That is, the univariate test indicates how valid the prediction statements are when taken one at a time.

Multivariate Test. The joint explanatory power of all seven independent variables is tested via logit analysis. Two logit models are estimated, one for the US firms and the other for the Taiwanese firms, and their explanatory powers are compared.[17]

Sample Selection

The sample period for the US firms runs from 1984 through 1987. The data source is the Dow Jones News Retrieval Service. A sample of 151 observations resulted from the following set of criteria:[18]

a. The firm must have made a point, interval, or percentage forecast of earnings per share or of profits.
b. The forecast must have been made by an official of the firm.
c. The firm's fiscal year end must be December 31. This was needed to ensure comparability in cross-sectional comparisons.
d. The firm's common stock must be traded on either the American or the New York Stock Exchanges. This criterion ensures that the sample firms are of sufficient size and stability.

The sample period for the Taiwanese firms runs from 1985 through 1989. The data were extracted from articles published in 19 large newspapers in Taiwan. Criteria a, b and c above were also applied. Instead of criterion d, the Taiwanese firms must have their common stocks listed on the Taiwan Stock Exchange. These procedures resulted in 189 observations in the Taiwanese sample.[19]

To apply a match-pair design to each sample, a control group of firms was randomly selected from the non-release firms with the same industry classifications as the treatment firms. A four-digit SIC code was used for the US sample, and a two-digit code was used for the Taiwanese sample.

Measuring the Dependent and Independent Variables

The dependent variable in Equation 1 is coded as a zero-one variable, with 0 indicating a non-release firm and 1 indicating a release firm. The independent variables are measured as follows:

1. X_1 represents firm size and is measured as a natural logarithmic transformation of the total book value of the firm's assets. This will be referred to as the *SIZE* variable.
2. X_2 represents the amount of new external capital raised immediately after management's earnings forecast. It is defined as (New debt + New equity)/Total assets, where the numerator variables are measured within three months of the forecast date (the *CAPITAL* variable).
3. X_3 represents the level of good news and is measured as the firm's average accounting rate of return for the most recent three years *minus* the industry's average accounting rate of return for the same period (the *NEWS* variable).[20]
4. X_4 represents the firm's market share and is measured as the firm's total sales divided by total sales of the industry (the *MSHARE* variable).

5. X_5 represents the magnitude of forecast errors made by financial analysts. Following usual practice,[21] it is measured as $|(b-a)/a|$ where a is analyst earnings forecast and b is actual earnings (the *ERROR* variable).
6. X_6 represents the influence of management forecast on security analysts' expectation formation. It is measured by $(c-b)/(b-a)$, where a and b are defined above and c is analyst earnings forecast subsequent to the release of management's earnings forecast (the *INFLUENCE* variable).
7. X_7 represents the variability of the firm's earnings over time. A ten-year period is used to estimate the variability.[22] It is measured by the variance of the series $(E_t - E_{t-1})/E_{t-1}$, $t = 1, 2, 3, \ldots, 10$, where E_t is the firm's earnings per share in year t (the *EVAR* variable).

Results

Sample Characteristics

Table 2 summarizes the mean and variance of each independent variable for the release firms (treatment group) and the non-release firms (control group). US firms are presented in Panel A and Taiwanese firms in Panel B. It should be noted that some data are not available for some of the independent variables. This missing observation problem is particularly noticeable in the cases of *ERROR* and *INFLUENCE*, and this is true for both Panels A and B.

Table 2 gives several impressions of the two samples. First, the release firms taken as a whole are slightly larger than the non-release firms in the US sample, but

Table 2. Descriptive statistics of explanatory variables

Panel A, US sample: 150 release firms and 150 non-release firms; 1984–1987

Variable	Hypothesis tested	Sample size	Release firms		Non-release firms	
			Mean	S.D.	Mean	S.D.
X_1 (*SIZE*)	Agency cost	150	7.56	1.90	6.96	2.00
X_2 (*CAPITAL*)	External financing	150	0.06	0.12	0.11	0.28
X_3 (*NEWS*)	Signaling	150	0.02	0.05	–0.01	0.06
X_4 (*MSHARE*)	Disclosure cost	140	0.16	0.23	0.11	0.18
X_5 (*ERROR*)	Expectation adjustment	55	0.75	2.53	0.59	1.66
X_6 (*INFLUENCE*)	Managerial influence	55	0.81	0.39	1.02	0.69
X_7 (*EVAR*)	Earnings variability	147	104.00	619.00	96.00	428.00

Panel B, Taiwan sample: 188 release firms and 188 non-release firms; 1985–1989

Variable	Hypothesis tested	Sample size	Release firms		Non-release firms	
			Mean	S.D.	Mean	S.D.
X_1 (*SIZE*)	Agency cost	188	22.08	1.21	22.03	1.27
X_2 (*CAPITAL*)	External financing	188	0.01	0.03	0.11	0.03
X_3 (*NEWS*)	Signaling	171	–0.01	0.07	0.01	0.08
X_4 (*MSHARE*)	Disclosure cost	187	0.11	0.14	0.11	0.14
X_5 (*ERROR*)	Expectation adjustment	103	1.08	2.09	0.55	0.69
X_6 (*INFLUENCE*)	Managerial influence	97	0.85	1.28	2.91	13.68
X_7 (*EVAR*)	Earnings variability	169	37.00	207.00	28.67	136.00

the same is not true in the Taiwanese sample.[23] Second, in both samples the release firms tend to raise *less* external capital than the non-release firms, which is inconsistent with the prediction of the external capital theory. Third, US release firms tend to report more good news, as the signaling theory would predict. But this phenomenon is reversed in the Taiwanese sample. Fourth, as indicated by the *MSHARE* variable, US release firms are in a more competitive position to issue forecasts than US control firms. Yet, in the Taiwanese sample, the treatment and control groups are nearly the same in this regard.

Interestingly, in both samples the *ERROR* variable indicates some correspondence between the firm's tendency to issue forecasts and the level of inaccuracy in analyst forecasts. Moreover, the *INFLUENCE* variable also indicates that management forecasts have an impact on security analysts' revision of their previously issued forecasts. This impact is particularly significant in the Taiwanese sample. Finally, contrary to the prediction of the earnings variability theory, both samples suggest that the treatment firms on average have higher, rather than lower, earnings variability.

Univariate Tests

Results from the univariate test are presented in Table 3. Panel A indicates that *SIZE, NEWS, MSHARE*, and *INFLUENCE* are all significantly correlated with the firm's choice to issue earnings forecasts in the United States. The signs of their correlations are also as expected. These results support the agency cost, the signaling, the competitive disclosure cost, and the managerial influence theories as useful

Table 3. Univariate test results

Panel A, US sample: 150 release firms and 150 non-release firms; 1984–1987

Independent Variable	Hypothesis tested	Expected sign	Correlation[a]
X_1 (*SIZE*)	Agency cost	+	0.16*
X_2 (*CAPITAL*)	External financing	+	0.03
X_3 (*NEWS*)	Signaling	+	0.20*
X_4 (*MSHARE*)	Disclosure cost	+	0.13*
X_5 (*ERROR*)	Expectation adjustment	+	0.04
X_6 (*INFLUENCE*)	Managerial influence	–	–0.18*
X_7 (*EVAR*)	Earnings variability	–	0.02

Panel B, Taiwan sample: 188 release firms and 188 non-release firms; 1984–1987

Independent Variable	Hypothesis tested	Expected sign	Correlation[a]
X_1 (*SIZE*)	Agency cost	+	0.01
X_2 (*CAPITAL*)	External financing	+	0.02
X_3 (*NEWS*)	Signaling	+	–0.02
X_4 (*MSHARE*)	Disclosure cost	+	0.01
X_5 (*ERROR*)	Expectation adjustment	+	0.17*
X_6 (*INFLUENCE*)	Managerial influence	–	–0.10
X_7 (*EVAR*)	Earnings variability	–	0.02

* Significant at the 0.05 level.

[a] Point biserial correlation as defined in eq. (2). The *Y* variable in the correlation is a zero-one variable with one indicating a treatment firm and zero indiating a control firm.

Table 4. Cross-correlations between independent variables

Panel A, US sample: 150 release firms and 150 non-release firms; 1984–1987

	X_1	X_2	X_3	X_4	X_5	X_6	X_7
SIZE	–	–0.13	0.03	0.16	0.03	–0.07	0.04
CAPITAL		–	–0.08	0.10	0.11	0.04	0.00
NEWS			–	0.16	–0.26	–0.10	–0.09
MSHARE				–	0.00	–0.16	–0.04
ERROR					–	–0.01	0.31
INFLUENCE						–	0.04
EVAR							–

Panel B, Taiwan sample: 188 release firms and 188 non-release firms; 1985–1989

	X_1	X_2	X_3	X_4	X_5	X_6	X_7
SIZE	–	–0.02	0.09	0.41*	–0.08	–0.02	–0.14
CAPITAL		–	–0.04	–0.06	–0.01	–0.05	–0.02
NEWS			–	0.14	–0.16	–0.06	–0.08
MSHARE				–	–0.13	–0.03	–0.04
ERROR					–	–0.07	0.03
INFLUENCE						–	–0.02
EVAR							–

* Significant at the 0.05 level.

explanations of management forecasts in the United States. On the whole, the data lend substantial support to the theories set forth in the literature.

However, the same cannot be said about the Taiwanese data. Our overall hypothesis is that most of the theories are less useful explanations when applied to Taiwanese firms, the exceptions being the expectation adjustment and the managerial influence theories (*ERROR* and *INFLUENCE*). Panel B in Table 2 clearly bears out this contention. The only variable with the traditional level of significance is *ERROR*. Contrary to the findings for US firms, this result suggests that the primary objective for Taiwanese managements to issue earnings forecasts is to correct biased forecasts issued by financial analysts. To conclude, the univariate test unambiguously supports the overall hypothesis of this study.

Multivariate Tests

Pearson cross-correlations are first computed for the independent variables in each sample. Table 4 presents these correlations, which indicate that multicollinearity does not seem to be a concern.

Table 5 presents two logit models, the US model in Panel A and the Taiwanese model in Panel B. The overall goodness-of-fit of each model is indicated by the model χ^2. Based on this, the US model is statistically significant at the 0.01 level. Unlike the univariate test results, however, only two of the independent variables are significant at the 0.05 level. The results consistently support two of the four theories found to be valid based on the univariate tests. These are the signaling and the managerial influence theories. The agency cost and the disclosure cost theories are not supported by the logic analysis although they were supported by the univariate analysis. Finally, in keeping with the univariate test results, neither the external capital nor the earnings variability theories are supported by the data.

Table 5. Multivariate test results via logit analysis

Panel A, Logit model for US firms: 67 release firms and 67 non-release firms (Model $\chi^2 = 18.1$; Prob > $\chi^2 = 0.01$)

Independent variable	Hypothesis tested	χ^2	Prob > χ^2
X_1 (*SIZE*)	Agency cost	0.27	0.61
X_2 (*CAPITAL*)	External financing	0.75	0.39
X_3 (*NEWS*)	Signaling	5.09	0.02*
X_4 (*MSHARE*)	Disclosure cost	0.45	0.50
X_5 (*ERROR*)	Expectation adjustment	1.10	0.29
X_6 (*INFLUENCE*)	Managerial influence	4.39	0.04*
X_7 (*EVAR*)	Earnings variability	0.00	0.99

Panel B, Logit model for Taiwanese firms: 90 release firms and 90 non-release firms (Model $\chi^2 = 14.83$; Prob > $\chi^2 = 0.04$)

Independent variable	Hypothesis tested	χ^2	Prob > χ^2
X_1 (*SIZE*)	Agency cost	0.21	0.65
X_2 (*CAPITAL*)	External financing	2.91	0.09
X_3 (*NEWS*)	Signaling	0.11	0.75
X_4 (*MSHARE*)	Disclosure cost	0.12	0.73
X_5 (*ERROR*)	Expectation adjustment	3.47	0.06
X_6 (*INFLUENCE*)	Managerial influence	0.86	0.35
X_7 (*EVAR*)	Earnings variability	0.70	0.40

* Significant at the 0.05 level.

In the case of the Taiwanese firms, the univariate and the multivariate results are more in agreement with one another. In the univariate test, the *ERROR* variable is correlated with the decision to release forecasts, with the traditional 0.05 level of significance. This is approximately the impression given by the logit analysis as presented in Panel B, Table 1, which indicates that the *ERROR* variable is significant at the 0.06 level.

Taken as a whole, both the univariate and the multivariate tests lend support to the overall hypothesis of this study. That is, positive theories as to management's decision to release earnings forecasts better explain US firms' behavior than Taiwanese firms' behavior.

Conclusion

Two research questions motivated this study. First, do positive accounting theories have universal validity, or are their explanatory powers dependent on institutional and cultural preconditions? Second, given the recent interests in management earnings forecasts in Taiwan, can one apply existing positive theories developed in the US to analyze Taiwanese managers' behavior in this regard?

These two questions led us to evaluate the validity of a number of such theories to a sample of Taiwanese firms. For comparison purposes, these theories were also applied to a sample of US firms. A univariate analysis was used to evaluate the validity of theories taken one at a time. In addition, a multivariate analysis was used to evaluate their validity jointly. The results allow us to draw an unambiguous conclusion. The theories are largely valid when applied to US firms, but such validity is drastically reduced when applied to Taiwanese firms. So the answer to the two

research questions is no. Since we are able to predict this difference in explanatory power based on differences in institutional backgrounds, this evidence supports our contention that institutional backgrounds are crucial to the validity of positive accounting theories. When applying such theories across national boundaries, therefore, one has to be careful in checking whether the underlying assumptions of the theories remain valid, as they often are not.

It should be emphasized that, in spite of the negative tone, the implication of this finding is constructive because it not only strengthens our understanding of the positive theories, but also leaves further questions for future research. For example, it seems that positive economic theories are more universal than positive accounting theories. Is it because external financial reporting is much more institutionally dependent? Additionally, accounting inevitably relates to the information process. Is it because information processing is culturally dependent such that positive accounting theories lose their validity when cultural boundaries are crossed? Furthermore, one of the preconditions for positive accounting theories developed in the US seems to be the existence of efficient markets for securities, managerial labor, information, etc. To what extent will such theories break down when these market efficiencies are in doubt? In short we believe that cross-country development and testing of positive accounting theories can further enhance our understanding of the underlying phenomena.

Notes

1 See Ross Watts and Jerald Zimmerman, *Positive Accounting Theory* (Englewood Cliffs, New Jersey: Prentice-Hall, 1986), ch.1.
2 But if they choose to do so, such forecasts need to be first reviewed by a certified public accountant.
3 Michael Jensen and William Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* (October 1976), 305–360.
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14 In fact, during the sample period of this study, there were only two security analysis firms in Taiwan.

15 This statistic is designed to discriminate between two groups based on the characteristic of a continuous explanatory variable. See G. Ferguson, *Statistical Analysis in Psychology and Education*, 5th edn. (New York: McGraw-Hill, 1981) p. 428.

16 Because of the match-pair design, they are both equal to 0.5.

17 An alternative approach to the multivariate analysis would be to pool the two countries' data and use a dummy variable technique. This alternative was not pursued because the financial statements of the two countries were denominated in different currencies.

18 Since some of the firms had more than one forecast releases during the sample period, there are 122 different firms in the treatment sample.

19 Because of multiple releases by the same firm, there are 104 different release firms in the treatment group.

20 Accounting rate of return is defined as net income over book value of net assets.

21 Eugene Imhoff and Paul Pare, "Analysis and Comparison of Earnings Forecast Agents." *Journal of Accounting Research* (Autumn 1982), 429–439.

22 We follow Gregory Waymire, "Earnings Volatility and Voluntary Management Forecast Disclosure." *Journal of Accounting Research* (Spring 1985), 268–295.

23 Additionally, the two samples differ in average size because the two currencies are of vastly different values.

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Just-In-Time Manufacturing Systems and Inventory Reported in Financial Statements: A Cross-National Comparison of Manufacturing Firms

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Key words: International comparison; Inventory management; JIT and financial statements; JIT manufacturing; JIT systems; Zero inventories

Abstract: *This study compares the inventory levels and profitability of Japanese electronics firms with those from other industrial nations. Japan has used Just-in-Time inventory system for over a quarter century. Other industrial nations have increasingly adopted JIT systems in recent years with mixed results. The literature suggests that JIT implementation takes several years to achieve optimal results. The study results suggest that the Japanese firms maintain lower inventory levels but do not exhibit higher levels of profitability relative to firms from other industrial nations.*

Introduction

Traditionally, inventories constitute a significant portion of the total assets of most manufacturing concerns. An increasing number of manufacturing firms in the Western industrial nations are developing and implementing Just-in-Time (JIT) production systems with mixed results. Some firms have reported increases in their inventory levels after implementing JIT systems.

The purpose of this paper is to present the results of an empirical study designed to measure the effect of JIT manufacturing systems by comparing the inventory levels and profitability of Japanese manufacturing firms with those manufacturing firms of other industrial nations.[1] Since there is no such study reported in the literature, this research will enhance our understanding of the consequences of JIT production and purchasing systems.

JIT is a management philosophy used to control inventories in a production process. It focuses on undertaking activities immediately as needed or demanded, and

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eliminating all activities that do not add value to a product or service.[2] The manufacturing process is run on a demand-pull basis so that material movements are triggered solely by customer demand, where inventories are pulled to the next work station (the customer) when needed. There are no stock rooms where inventory is pushed in order to offset lead times of delivery or demand. Central to the JIT manufacturing philosophy is the view that all inventories are undesirable and should be eliminated or minimized. Emphasis is placed on simplifying activities on the production line so that areas of non-value added activities can be easily detected and eliminated.[2] In contrast, the classical Economic Order Quantity (EGO) model has been a system of mass production in which buffer inventories are made available so that unexpected demand for a product can be met.[3]

JIT has attracted a great deal of interest and enthusiasm in contemporary American industries. The evolution and effective implementation of the concept are seen as a key to restoring America's competitive edge in both international and domestic markets.[4] The acclaim bestowed on JIT is the result of the rapid growth, high visibility and economic success of Japanese firms using JIT. The success of Japanese firms is attributed to JIT inventory control systems[5] and management philosophy.

The remaining portion of this paper is organized into advantages and disadvantages of JIT, the study, summary discussion, and conclusions.

Advantages of JIT

Most of the research on JIT is based on case studies of individual companies that have instituted JIT systems. Researchers seem to agree that JIT manufacturing systems increase productivity as well as reduce inventories to a minimum. The participants of the 1986 National Association of Accountants' (NAA) conference in Boston reached an accord that stated: "the effect of zero inventory and just-in-time techniques, will result in far less waste, reductions in rework, process yield increases, work force motivation improvements and an absolute reduction in inventories."[4]

In his comparison of JIT to EOQ and Maximum Reorder Period (MRP), Sauers[6] reports that JIT increases flexibility through reduced set up times, reserve capacity, and minimal work-in-process. In the traditional model, work-in-process clogs the production system, needed parts are often difficult to find, valuable space is used, creating greater distance between machines; communication is also impaired and material handling costs are increased. He reports that the waiting time for parts in work-in-process queues is estimated to be approximately 70 per cent to 80 per cent of manufacturing lead time.

JIT is concerned with the optimization of the entire production/distribution network rather than a particular subsystem. It seeks process efficiency improvement and uses inventory management as a tool for doing so. Thus short-run diseconomies, such as inventory shortages and increased transportation costs, are exchanged for long-run overall economies. According to O'Neal[3] the goal of the JIT system is the ultimate elimination of all inventory except that which is either in transit or being processed, and both of these inventory pools are to be minimized throughout the system. Only costs that add value to the product are acceptable.

On the question of productivity, Sauers[6] argues that JIT increases flexibility through reduced set-up times, reserve capacity, and minimal work in process. His findings indicate that the elimination of work-in-process inventory increases the productivity of available factory floor space and results in a tighter integration of work centers. O'Neal[3] reports that the application of the JIT concept leads to a reduction of set-up times to a point where they become optimally negligible with lot sizes correspondingly reduced without financial penalty. He observes that 79 per cent of respondents of a survey of JIT adopters reported higher productivity as a direct result of JIT; 86 per cent reported improved product quality as a result of their JIT programs.

JIT implementation facilitates more accurate production cost information development for management. It emphasizes operational simplification and continuous improvement in operational efficiency. Consequently, better cost planning, cost control and cost reduction are achieved in the entire organization through JIT production systems.

Disadvantages of JIT

In spite of the advantages of JIT and the reported successes, several companies reject JIT as inappropriate for their operations.[2] Critics of JIT suggest that the buyer's inventory reduction is merely the result of pushing inventory back into the distribution channel so that it is held by the supplier and that, in fact, no net inventory reduction occurs in the total system.[7]

One-third of the vendors practicing JIT surveyed by Barton, et al,[8] reported increases in raw materials inventory and work-in-process; nearly 50% of these vendors reported that their finished goods inventory had increased after the adoption of JIT. According to them, this phenomenon indicates that instituting JIT as a policy does not necessarily mean that it can be fully realized within a short period of time. Among the reasons given for this anomaly are that JIT goals require commitment by the entire company as well as a complete change in philosophy, both of which take time, probably years, to achieve. According to their study results, JIT can be operational in two years but needs five to ten years for optimal results. They add a caveat that it has taken the Japanese more than a quarter of a century to attain their present level.

The Study

Japan's economic success is partly attributed to JIT management philosophy. The 1986 NAA (now The Institute of Management Accountants) Annual Meeting, identified JIT as a key to restoring America's competitive edge in both international and domestic markets.[4] Several firms in Western industrial nations have implemented JIT in recent years. Japan on the other hand has used the system for over 30 years. Thus Japan is considered the archetype country of JIT philosophy and production management.

This study seeks to compare the inventory levels and profitability of Japanese electronics firms with those of their industrial counterparts. Significant differences

may be an indication that the period it takes to attain optimal results with JIT may not have been attained by non-Japanese firms implementing the system. On the other hand, the absence of significant differences may suggest that the assertions that the implementation of JIT systems takes several years to attain optimal results reflecting lower inventories and higher productivity may be unfounded.

The study tests the hypotheses that the adoption of JIT systems by manufacturing firms will result in:

H_1: No differences in the levels of inventory relative to budgeted sales[9] and total assets between Japanese manufacturing firms and manufacturing firms from other industrial nations where JIT is less than 10 years old;

H_2: No differences in the percentages of operating income to sales and operating Return on Investments (ROI) between Japanese firms and those of other industrial nations studied (an approximate and assumed measure of profitability).

To test the preceding hypotheses, information on selected manufacturing firms in the electronics industry was obtained from their financial statements, annual reports, and Moody's International Manuals. Key word search procedure was used to identify firms that implement JIT systems.

Fifty observations from each country were taken from the financial statements of manufacturing firms from the United States, Canada, Japan, West Germany, Australia, and the UK for the period between 1984 and 1986. Thus, a total of 300 firms were used. Kruskal–Wallis test and Dunnett's *t*-test procedures were employed to analyze the data and test the hypotheses stated above. Four ratio variables were used as inputs to the hypotheses testing. The ratios were: (i) inventory to budgeted sales (INV/BSLS); (ii) inventory to total assets (INV/TA); (iii) operating income to sales (OIC/SLS); and (iv) operating Return on Investments (ROI). The first two ratios serve as indicators to the relative levels of inventory by the firms in the study while the remaining two are used as indicators of the firms' profitability.

To test if overall differences exist between any two means, the Kruskal–Wallis test was employed. This test, however, does not indicate which means differ significantly from the others. The Dunnett's test, which is a multiple comparison method employed in this study, is a special case of means comparison in which the only comparisons that are tested are between a set of new treatments and a single control.[10] In this case Japan is treated as the control group.

With this procedure, a mean is significantly different from the control if

$$|\bar{y}_1 - \bar{y}_0| \geq d(\alpha;\kappa,\nu,\rho)\ \sqrt{(\tfrac{1}{n_1}+\tfrac{1}{n_0})}$$

where:

y_0 is the control mean, and

$d(\alpha;\kappa,\nu,\rho)$ is the critical value of the several "one t statistics" for κ means compared to a control, with ν degrees of freedom and correlation ρ.[11]

Compared to other methods of general mean comparison the Dunnett's test results in narrower confidence limits for comparisons $|y_1 - y_0|$, hence it has higher power.[10] It holds the maximum experimentwise error rate under any null hypotheses to a level not exceeding the stated alpha (α).

Table 1. Mean summary of JIT comparison means

Country	n	INV/BSLS	Rank	INV/TA	Rank	OIC/SLS	Rank	ROI	Rank
Japan	50	0.1695	2	0.1742	1	0.0288	5	0.0294	6
Australia	50	0.2045	5	0.2673	4	0.0407	4	0.0566	4
Canada	50	0.1708	4	0.3048	5	0.1034	1	0.2849	1
United Kingdom	50	0.2631	6	0.3810	6	0.0438	3	0.0582	3
United States	50	0.1572	1	0.2113	2	0.0570	2	0.0728	2
West Germany	50	0.1667	3	0.2148	3	0.0287	5	0.0521	5
Total	300								

Since the data may not be normally distributed and the actual distribution of the populations from which the samples were taken are not known to the investigator the Kruskal–Wallis nonparametric procedure was employed to validate the Dunnett's test result. Under the circumstances described, the results of nonparametric statistics are considered to be more robust than the parametric test.[12] The Kruskal–Wallis procedure is an extension of the rank sum test to a comparison of more than two populations. The statistic H is expressed as:

$$H = \frac{12}{N(N+1)} \sum_{i=1}^{k} \frac{T_i^2}{n_i} - 3(N+1)$$

where:
n_i is the number of observations in the i^{th} sample ($i = 1, 2, \ldots, k$),
N is the total number of observations in the k samples and
T_i denotes the sum of the ranks for the measurements in sample i after the combined sample measurements have been ranked.

For a specified value of a, the null hypothesis is rejected if H exceeds the critical value of X^2 for $a = \alpha$ and d.f. = $k-1$.

The results of the data analysis are presented in Tables 2 through 5. In Table 1, the means of the four ratios studied are presented. The results of the hypotheses tested are presented in Tables 2 through 5. The objective for testing H_1 is to determine that the inventory levels maintained by Japanese manufacturing firms compared to manufacturing firms from other industrial nations are not significantly different. To test this hypothesis, two ratios were used as inputs. The ratios are inventory to budgeted sales (INV/BSLS) and inventory to total assets (INV/TA).

Table 2. Nonparametric summary of JIT comparison:

Kruskal–Wallis test (chi-squared approximation)

Inventory/budgeted sales
$H = 12.379$, d.f. = 5, PROB > H = 0.0299*

Inventory/total assets
$H = 26.172$, d.f. = 5, PROB > H = 0.0001**

Critical value of chi-squared with $\alpha = 0.05$ and d.f. = $k-1 = 5$ is 11.0705.
Critical value of chi-squared with $\alpha = 0.01$ and d.f. = $k-1 = 5$ is 15.0863.

* Significant at the 0.05 per cent level.
** Significant at the 0.01 per cent level.

Table 3. Dunnett's test ($\alpha = 0.05$, d.f. = 294, critical value of Dunnett's $T = 2.526$)

a) Inventory/budget sales (minimum significant difference = 0.1040)

Country comparison	Differences between means
Japan – Australia	0.0351
Japan – Canada	0.0014
Japan – UK	0.0937
Japan – USA	0.0122
Japan – W. German	0.0028

b) Inventory/total assets (minimum significant difference = 0.1733)

Country comparison	Differences between means
Japan – Australia	0.0931
Japan – Canada	0.1306
Japan – UK	0.2068*
Japan – USA	0.0371
Japan – W. Germany	0.0407

*Comparison significant at the 0.05 level.

The results of the nonparametric procedures using the Kruskal–Wallis test (see Table 2) indicate significant differences at the 0.05 level. The Japanese, American, and West German firms exhibit the lowest mean scores, which may be an indication that they are indeed maintaining lower levels of inventory relative to manufacturing firms from the remaining industrial nations.

The results of the Dunnett's test presented in Table 3a do not provide enough statistical evidence to reject the null hypothesis. However, the results in Table 3b suggest that Japanese and the British Firms show a significant mean difference in inventory to total assets at the 0.05 level.

The objective for testing H_2 is to determine that the Japanese firms compared to other firms will show increase in profitability as a result of using JIT manufacturing systems for a much longer period than their counterparts. Due to the lack of adequate criteria to measure either the overall profitability or that part of increased profitability generated by the adoption of JIT, operating income to sales (OIC/SLS), and operating Return on Investment (ROI) were used as inputs. The Kruskal-Wallis test and the Dunnett's test results are presented in Tables 4 and 5.

The results suggest that in both cases there are significant differences at the 0.01 and 0.05 levels. The Canadian manufacturing firms exhibit significant differences relative to the firms from other industrial nations in the study. An examination of the means suggests that the Canadian firms may have higher ratios of operating

Table 4. Nonparametric summary of JIT comparison: Kruskal–Walllis Test (chi-squared approximation)

Operating income/sales

$H = 79.468$, d.f. $= 5$ PROB $> H = 0.0001$**

Operating return on investment

H = 104.28, d.f. = 5, PROB>H = 0.0001**

Critical value of chi-squared with $\alpha = 0.01$ and d.f. = 5 is 15.0863

** Significant at the 0.01 per cent level.

Table 5. Dunnett's Test ($\alpha = 0.05$, d.f. = 294, critical value of Dunnett's $T = 2.526$)

(a) Operating income/sales (minimum significant difference = 0.0289)

Country comparison	Differences between means
Japan – Australia	0.0120
Japan – Canada	0.0746*
Japan – UK	0.0151
Japan – USA	0.0283
Japan – W. German	0.0001

(b) Operating return on investment (minimum significant difference = 0.1164)

Country comparison	Differences between means
Japan – Australia	0.0272
Japan – Canada	0.2555*
Japan – UK	0.0288
Japan – USA	0.0434
Japan – W. Germany	0.0227

*Comparison significant at the 0.05 per cent level.

income to sales and operating ROI than firms from other industrial nations. However, the U.S. firms rank second to Canada, whereas the West German and the Japanese firms rank fifth and sixth respectively (see Table 1). The results of the Kruskal–Wallis tests presented in Table 4 and the Dunnett's test in Table 5 show significant differences for the two ratios

Summary, Discussion and Conclusions

Major conclusions in this research are based on the results of the nonparametric analysis since it is considered to be more robust than the Dunnett's test when the parametric assumptions about the data are in doubt. The research results support the assertions made in the literature that the adoption and proper implementation of JIT results in lower inventory levels.

JIT Firms from the United States, Japan, and West Germany maintain relatively lower inventory levels than their Australian, Canadian, and British counterparts (Table 1). On the one hand, this result suggests that the argument advanced by Barton et al,[8] that implementation of JIT takes up to 10 years to yield optimal results may be unfounded. On the other hand, the latter group of firms may not have attained the JIT implementation level for the built-in efficiency to be significant enough to match the effects attained by the former group. The results also suggest that the Japanese may no longer be the archetype of JIT manufacturing systems in the area of inventory management. Additional research in this area is suggested.

In the area of operating results and profitability, the US firms consistently placed second to Canada for the ratios used in the study. Whereas the Japanese and the West German firms are shown to maintain lower levels of inventory, this is not accompanied by either higher ratio of operating income to sales or operating ROI as was expected. Several reasons may account for these results. It is possible that the ratios chosen to represent profitability/productivity are poor surrogates. The literature notes that JIT has several built-in costs and that it is important to be cognizant of

these associated costs so that they may be adequately compensated for. It is also possible that the result validates what critics of JIT have been asserting, that there may be no net cost benefits to JIT in the entire system.[7]

Several organizations adopt different modified versions of JIT and flexible manufacturing systems. In all cases it is important to consider all the possible costs that might be associated with the adoption and implementation of JIT. These costs should be compared to the cost savings attributed to lower inventory levels. It is important that costs such as increased transportation costs, quality control, and inspection costs are outweighed by cost savings such as lower rework costs, lower machine set-up costs, and lower or no inventory carrying costs. Finally, it is suggested that manufacturing firms carefully evaluate their environments and modify the system to suit their particular needs and be willing to grow with and upgrade their systems according to their rates of growth and needs.

Further research is needed to study the costs associated with the implementation of JIT manufacturing systems. A thorough examination and discussion of these costs will be beneficial in giving guidance to manufacturing firms considering the implementation of JIT production.

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An Empirical Investigation of Attitudinal Factors Affecting Educational Course Coverage of International Topics

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***Abstract**: This study examines the attitudinal factors in the United States affecting the coverage of international issues in the undergraduate accounting curricula. An analysis was conducted on 220 responses (56.6%) from department chairpersons and members of the international section of the American Accounting Association using an attitude/behavior model adapted from the psychology literature. Consistent with the model's prediction, we find that favorable attitudes towards internationalization are significantly correlated with course coverage. Further, specific salient beliefs which discriminate coverage are identified and discussed. One finding is that there exists a strong perception of lack of rewards for faculty who integrate international issues. This paper also makes methodological suggestions for accounting education research including possible applications of the attitude/behavior model and the refinement of the measurement of the related accreditation standard.*

The primary purpose of this paper is to identify the important attitudinal beliefs affecting coverage of international topics in the undergraduate accounting curricula in the United States. At first-glance, the desirability of including an international dimension in US accounting curricula would appear to be beyond question. Given the continued globalization of the US economy and the recent international mergers of public accounting firms, one would expect international topics to have permeated undergraduate business curricula. Moreover, since 1974, the American Assembly of Collegiate Schools of Business (AACSB) has required a "worldwide dimension" in curricula as part of its accreditation requirements.[1] However, surveys in both accounting and other business disciplines have shown mixed evidence of this.[2]

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International issues should be integrated throughout the accounting curriculum. To limit them to a single international business or international accounting course may imply that the international dimension of business is irrelevant to the rest of the curriculum. Students may therefore "switch off" their international sensitivity when the international course is completed. They will better recognize the relevance of international issues to accounting if this relevance is discussed in the context of the functional accounting courses. More pragmatically, the introduction of one or two international class sessions in a functional course is often the first critical step towards internationalizing a curriculum

Effective internationalization of curricula cannot occur without faculty support. The raison d'être of this study is to identify the factors that motivate functionally trained accounting faculty to integrate international issues within their disciplines at the undergraduate level. It is these faculty, whose primary domain of expertise lies outside the international area, who typically are confronted with the task of integrating international issues into undergraduate courses

Understanding the attitudes of faculty will help us to understand the factors that affect the coverage of international topics. This is especially true for the people most likely to be responsible for its implementation, namely departmental chairs and faculty with an interest in international accounting. According to the attitude-behavior literature,[3] there is a strong correlation between attitude and behavior. Behavior (in this case, the adoption in some form of an internationalized undergraduate curriculum in accounting) can be predicted in part from faculty attitude towards the consequences or outcomes resulting from this behavior. A reliable instrument that measures this attitude can identify the individual salient beliefs of that behavior that best discriminate between respondents who perceive there is (or should be) a greater degree of international coverage from those who perceive there is (or should be) less coverage.

The major objective of this study is to identify the salient beliefs affecting the coverage of international issues. This paper examines the association between attitudes to the inclusion of international issues in the accounting curriculum and actual and desired coverage. A better understanding of the reasons why curricular changes are made or resisted would be useful to academic administrators, and more generally, to accreditation bodies wishing to promote such changes. It could also enable those responsible for implementing changes to curricula to provide more effective guidance for the change process.

To enhance our understanding of the relationship between attitude and coverage, we need to refine the measure of coverage used in previous studies. For example, Stout and Schweikart[4] used binary measures to identify coverage of international accounting topics in the curriculum. This study extends this measure by using a four-point measure of the amount of time perceived by respondents as being devoted, and the amount that they felt should be devoted, to a particular topic in a particular course. Desired integration is also studied because past surveys have shown that very little international coverage exists within the functional courses of accounting.[5] Differences between respondents from AACSB schools and non-AACSB schools are examined. This AACSB standard is refined to include a distinction between non-AACSB schools that intend to apply for accreditation and those that do not,

Since non-AACSB schools that intend to apply for accreditation are probably implementing curricula similar to AACSB schools, a failure to examine or control for intention to apply could obscure differences between AACSB and non-AACSB schools. We consider the implications of this distinction for accounting education research.

The next section presents the methodology, including questionnaire development, and a description of the subjects and their schools. This is followed by the results section. The final section contains the discussion, conclusions, and implications for both undergraduate accounting education and accounting education research in the United States.

Methodology

Development of Questionnaire

Our instrument is adapted from the,well-established methodology of the attitude/behavior measurement literature.[6] To construct the questionnaire, 30 pre-tests were mailed to a random sample of 15 department chairs and 15 other faculty members listed in Hasselback[7] as interested in international issues. Responses were received from 12 subjects including 7 department chairs. The first objective of the pre-test was to develop an attitude instrument that captures the construct "attitude towards integrating international issues in the accounting curriculum." This is consistent with the theory of reasoned action found in the attitude/behavior measurement literature[8] which suggests that, to predict behavior (or its antecedent, intention), one must examine the attitude toward the possible outcomes or consequences of performing the behavior. Attitude in this model has a very specific definition. It is the aggregation of individual salient beliefs as to the outcomes or consequences of performing the beliefs, each of which, Ajzen[9] (p. 120) states, "links the behavior to a certain outcome, or to some other attribute such as the cost incurred by performing the behavior."

Respondents were therefore asked to list all positive and negative outcomes or consequences that might be associated with a faculty member's effort to integrate international issues in his or her courses. To be included in the final test instrument, an outcome had to be identified in more than one pre-test response. Eighteen distinct outcomes emerged from the pre-test: nine negative and nine positive. (The importance of this in the overall attitude score will be discussed later.) The pre-test also indicated that an accounting department's commitment to internationalizing its curriculum was important in influencing coverage. Accordingly, in the main questionnaire, a separate section measured departmental commitment.

The second objective of the pre-test was to develop a comprehensive but concise list of international accounting topics. These topics would be the basis of our measures of coverage. Sherman[10] identified 30 international accounting subject areas and had respondents evaluate their relative importance. By combining overlapping items, we reduced Sherman's list to 19, arranged alphabetically. To reduce these further, we identified six broad topic areas within international accounting based on chapter

headings in Arpan and AlHashim.[11] For each of the 19 subjects, respondents were asked to indicate their first and second choice of topic which best covered that subject. For example, for "Foreign Currency Translation" the first choice of topic might be "Financial Reporting of MNE's", and the second "Comparative National Regulatory and Disclosure Requirements." They were also offered the opportunity to add other topics and subject areas. Seven broad topics (auditing, comparative accounting standards, financial reporting of multinational corporations, inflation accounting, control of multinational corporations, taxation, and transfer pricing) emerged from their responses. We used measures of perceived coverage of these seven topics to examine the relationship of coverage with attitude and its component salient beliefs.

Subjects

A four-page questionnaire was distributed to a random sample of 200 accounting department chairs identified in Hasselback[12] and to an additional random sample of 200 accounting faculty who were members in 1989 of the American Accounting Association's (AAA) international section. International section members are included because of their strong interest in international coverage. Chairpersons were considered the most appropriate additional group because they are expected to be both the most knowledgeable of and involved in, innovations across the curriculum. We excluded any chairperson who was also a member of the international section. Based on discussions with colleagues at several universities, other accounting educators were excluded. It was felt that other accounting educators were not aware of the appropriateness of international topics in various accounting courses and would thus introduce unnecessary "noise" in the subject analysis conducted. We selected a sequential sample of 1 in 15 from a list of AAA international section members in zip code sequence. Thus, large schools (with more than 15 faculty members of the AAA international section) may be duplicated. However, since the focus of our study is faculty perceptions, and not course coverage the fact that a school (but not an individual) might be included more than once in our sample is not problematic.

Out of 389 possible responses (11 were returned as undeliverable), an initial mailing produced 146 responses and a second mailing generated an additional 74. The total of 220 responses represents an effective response rate of 56.6%. Analyzing the responses further, a greater proportion of responses came from members of the international section (119 or 61%) than from chairs (101 or 52%). Finally, 135 respondents were from schools with AACSB accreditation, 37 from schools which were not accredited but were planning to seek accreditation in the next three years, and 43 from schools that neither had accreditation nor were planning to seek it in the next three years. Five respondents were from non-AACSB schools but did not respond on their school's intentions. The importance of distinguishing non-AACSB schools by their intention to seek accreditation is discussed later.

Because faculty who completed the questionnaire might have exhibited greater than average interest in international issues, a non-response bias was possible. To test for possible non-response bias, the 74 responses from the second mailing were compared to those from the first mailing. This method follows the approach suggested

by Armstrong and Overton[13] who argue that later "waves" of responses are similar to non-respondents. Using an alpha level of 0.10, Mann-Whitney U tests indicated no significant differences between the responses from the first and second mailing for an overall scoring of departmental commitment, individual attitudes, what is currently being covered and what should be covered in the curriculum. Accordingly, for all subsequent analyses, data for the aggregate sample are presented.

Results

The first set of analyses presents data on perceptions of which international issues are being covered and which ones should be covered in the undergraduate accounting curriculum. These findings will then be used to examine the relationship between the attitudinal factors affecting coverage and actual and desired coverage.

Current Coverage Versus Expectations

Opinions differ on how best to integrate international topics into existing accounting courses. Stout and Schweikart[14] found that both academics and practitioners believed a separate international accounting course was the most effective approach. In contrast, our sample showed that such courses are still relatively rare, although they are becoming more common. Of the 220 respondents, 36 (16.4%) indicated that their school offered a separate course in international accounting (only two required such a course), with approximately five to ten percent of accounting majors taking the course when not required. However, 97 (44.1%) respondents replied that their school had an undergraduate international business course of which approximately one quarter of these courses (22) were required. In schools where the course was not required, only 5% of accounting majors took the course. In both cases (international accounting courses and general international business courses), the trend towards offering these courses is increasing; 33 of the international business courses and 11 of the international accounting courses had been added to the curriculum after 1984.

Since a separate course in international accounting is still rare, and most often an elective, the primary academic exposure to international issues for undergraduate accounting students is within the existing functional accounting curriculum. Our next set of questions examined respondents' perceptions of the extent to which various international accounting topics *are being covered* and *should be covered* in nine traditional undergraduate accounting courses.

Preceding these questions, subjects were presented with a brief description of the seven major international topics as determined by the pre-test (i.e., auditing, comparative accounting standards, financial reporting of multinational corporations, inflation accounting, control of multinational corporations, taxation, and transfer pricing). For example, "financial reporting of multinational corporations" was described as "including restatement/translation issues, consolidations, translation problems, FAS 52", and "control of multinational corporations" included "performance measurement, budgeting, foreign exchange risk". Each of the nine accounting courses

Table 1. Descriptive statistics for coverage of international topics in the undergraduate accounting curriculum

	Percentage response by category							
	Is included				Should be included			
	1	2	3	4	1	2	3	4
Accounting information systems								
Comparative accounting standards	72.6	21.7	3.8	1.9	35.7	32.2	18.9	13.3
Control of MNCs	66.5	25.8	6.5	1.3	23.4	32.4	31.7	12.4
Financial Reporting of MNCs	67.1	27.1	3.2	2.6	30.3	35.2	20.4	14.1
Total	68.7	24.8	4.5	1.9	29.8	33.3	23.7	13.3
Accounting theory								
Comparative accounting standards	34.9	40.4	13.7	11.0	3.6	21.0	43.5	31.9
Financial reporting of MNCs	32.4	33.1	23.4	11.0	5.8	23.2	42.8	28.3
Inflation accounting	23.4	20.7	33.1	22.8	5.1	18.1	40.6	36.2
Total	30.3	31.4	23.7	14.9	4.8	20.8	42.3	32.1
Advanced accounting								
Comparative accounting standards	40.1	33.3	17.2	9.4	7.5	27.6	36.2	28.7
Financial reporting of MNCs	25.9	22.8	22.3	29.0	4.6	14.5	37.6	43.4
Inflation accounting	44.7	23.9	19.1	12.2	22.2	25.7	28.7	23.4
Total	36.8	26.7	19.5	16.9	11.3	22.3	33.8	32.6
Auditing								
Auditing	54.3	28.2	10.1	7.4	9.3	35.5	34.3	20.9
Comparative accounting standards	56.6	29.1	11.6	2.6	13.0	39.0	32.2	15.8
Financial reporting of MNCs	59.7	28.0	8.6	3.8	18.8	40.3	26.7	14.2
Total	56.9	28.4	10.1	4.6	13.7	38.3	31.0	17.0
Cost accounting								
Comparative accounting standards	73.6	20.2	2.6	3.6	35.4	34.9	18.9	10.9
Control of MNCs	59.7	25.1	11.5	3.7	20.2	26.4	33.1	20.2
Transfer pricing	30.0	27.9	25.8	16.3	9.0	19.7	37.1	34.3
Total	54.5	24.4	13.2	7.8	22.9	26.4	29.2	21.4
Financial accounting								
Comparative accounting standards	45.7	39.9	9.0	5.3	14.5	40.1	30.2	15.1
Financial reporting of MNCs	44.6	39.2	11.3	4.8	20.5	35.7	31.6	12.3
Inflation accounting	34.4	40.3	16.1	9.1	20.5	35.1	29.8	14.6
Total	41.6	39.8	12.1	6.4	18.5	37.0	30.5	14.0
Intermediate accounting								
Comparative accounting standards	43.4	42.9	10.2	3.6	11.2	37.1	36.0	15.7
Financial reporting of MNCs	43.6	40.0	10.8	5.6	16.3	37.1	34.8	11.8
Inflation accounting	28.9	26.8	26.8	17.5	11.7	25.7	35.2	27.4
Total	38.6	36.6	15.9	8.9	13.1	33.3	35.3	18.3
Managerial accounting								
Comparative accounting standards	69.5	23.5	5.9	1.1	34.9	38.5	17.2	9.5
Control of MNCs	56.5	30.6	10.8	2.2	16.0	38.5	32.0	13.6
Transfer pricing	30.5	29.9	26.2	13.4	8.7	22.1	43.6	25.6
Total	52.1	28.0	14.3	5.5	19.8	32.9	31.0	16.3
Taxes								
Comparative accounting standards	75.4	18.2	2.1	4.3	36.0	39.3	14.6	10.1
Taxation	51.1	32.1	8.7	8.2	13.5	36.0	27.5	23.0
Transfer pricing	68.8	21.0	8.1	2.2	27.7	39.0	20.3	13.0
Total	65.2	23.7	6.3	4.8	24.5	36.3	19.8	14.6
Overall total for all nine courses	49.2	29.3	13.3	8.2	17.6	31.2	30.7	20.5

1 Not included in this course.
2 A brief mention in one or two class sessions.
3 Up to one class session devoted to this topic (1 session = 50–75 minutes).
4 More than one class session devoted to this topic.

listed the three most relevant international topics as identified in Sherman's[15] survey and by consensus of the authors. Subjects were asked to indicate on a four-point scale their beliefs concerning the extent to which each topic is currently included and should be included in the course. The scale was anchored by (A) "Not included in this course" (=1) and (D) "More than one class session devoted to this topic" (=4). Since the two measures of course coverage are not continuous, a normal distribution cannot be assumed. Tests involving these variables are therefore non-parametric. In all other cases, we report parametric tests. Table 1 presents descriptive statistics by topics, overall course totals and overall totals for all courses.

Table 1 indicates that, as we would expect, our sample believed that more should be covered than presently is. Since we are comparing the difference between each subject's pair of responses to the questions of perceived current coverage and desired coverage, the appropriate non-parametric test is the Wilcoxon signed ranks test. This test utilizes information as to the direction and the relative magnitude of the differences within pairs of responses.[16] The results of this test on respondents' perceptions found that subjects believed significantly more should be covered for each topic, for each course, and for the overall accounting curriculum ($p<0.001$ in every case). These results held both for the aggregate sample and when the analysis was conducted separately for chairs and international section members. Second, to the extent that international topics are covered, they are concentrated in financial accounting courses; accounting theory, advanced accounting, and intermediate accounting ranked in the top three for both what is and what should be covered. In contrast, despite the increased importance and complexity of managing multinational corporations, exposure to international control issues in the cost and managerial, accounting information systems, and tax courses is quite limited.

Because this sample was drawn from two separate groups (department chairs and members of the international section of the AAA), there is the possibility that these two groups have different perceptions concerning course coverage of international topics. While there were no significant differences between the two groups' current coverage measures (both overall and in each of the nine courses), the results of Mann-Whitney U tests indicate that department chairs believed less should be covered in accounting informations systems, auditing, managerial, and taxes (all $p<0.10$). advanced, financial (both $p<0.05$), accounting theory and intermediate ($p<0.10$). Since department chairs are influential in establishing the agenda for undergraduate accounting education, this could slow efforts to internationalize curricula

A comparison of responses from AACSB accredited schools ($n=135$) with non-AACSB accredited schools ($n=85$) indicated significant differences for what should be covered in accounting theory ($p<0.05$) and in cost accounting ($p<0.10$). In both instances, the AACSB respondents thought more should be covered. One possible problem in comparing AACSB schools to non-AACSB is that the latter group contains both schools with no intention to apply for accreditation and those that do intend to apply. Comparisons between AACSB and non-AACSB schools could fail to find differences because those non-AACSB schools that are intending to apply would probably be implementing a curriculum similar to those found in AACSB schools, Therefore, utilizing a screen of intention to apply within three years, 37 of the 85 non-accredited respondents indicated an intention to apply. For each of the nine

courses, those intending to apply thought more should be covered than those not intending to apply. A binomial test determining the probability that those intending to apply would indicate a need for greater coverage in each of the nine courses than those not intending to apply is 0.002.[17]

Effect of Attitude and Faculty Commitment

The main objective of this study is to use faculty attitudes towards internationalization to explain the diversity of existing coverage of international issues within a functional discipline. This section identifies factors influencing both current coverage and perceptions of what should be covered.

Ajzen and Fishbein[18] documented the need to use aggregated measures of attitude to predict behavior accurately. The construct, "attitude towards integrating international topics into undergraduate accounting courses" is measured by the Likert method of summated ratings, which aggregates each subject's responses for all of the attitudinal questions. Subjects were presented with the 18 outcomes elicited from the pre-test that were associated with integrating international issues in the undergraduate accounting courses. For each of the 18 statements, subjects were asked to indicate on a five-point scale the extent of their agreement or disagreement with the statement. This Likert scale was anchored by "Strongly disagree" (=1) and "Strongly agree" (=5). The means (standard deviations) for the attitude score are presented in Table 2.

Table 2. Means (standard deviations) for attitude towards integrating international topic into undergraduate accounting courses. Response scale extremes: 1 = Strongly disagree, 5 = Strongly agree

		Mean	(S.D.)
1.	Makes students more desirable in the marketplace	3.57	(0.87)
2.	Results in more interesting class discussions	3.79	(0.76)
3.	Is undesirable because extra preparation time takes away from research	1.95	(0.86)
4.	Is difficult to accomplish because of lack of examples in existing textbooks	3.63	(0.79)
5.	Is difficult to accomplish because of lack of available prepared examination questions	3.08	(1.12)
6.	Broadens a faculty member's range of general and academic interests	4.06	(0.72)
7.	Helps schools either achieve or maintain AACSB accreditation	3.79	(0.86)
8.	Doesn't prepare students for professional examinations (e.g. CPA, CMA)	3.29	(0.99)
9.	Results in a more global orientation on part of students	4.27	(0.67)
10.	Results in increased rewards for faculty member (e.g. promotion, tenure, and compensation)	2.28	(0.93)
11.	Will help the local community by providing expertise in international accounting issues	3.02	(0.99)
12.	Is difficult to accomplish because of lack of competence of accounting faculty	3.47	(1.05)
13.	Sensitizes students to differences between United States and other countries in form and content of financial statements	4.19	(0.52)
14.	Is perceived by my colleagues not to be relevant to an accounting program	2.74	(0.91)
15.	Results in removing existing relevant material from accounting courses	2.90	(1.05)
16.	Is difficult to achieve because of lack of colleagues with similar interests	3.29	(1.00)
17.	Is beneficial because it expands publishable research opportunities for faculty	3.62	(0.81)
18.	Is difficult because of lack of access to international experts from industry	3.06	(1.02)

Note: The means and standard deviations are based on the actual responses. In order to calculate the overall attitude score, the answers to the negative outcomes have to be reversed. For example, the mean of 1.95 reported above for statement 3 became a mean of 4.05 when constructing the overall attitude score.

To generate the overall attitude score, the responses for each of the negative outcomes were rescaled. This was done in order to create a meaningful overall attitude score which is then related to current and desired coverage. For example, a "strongly disagree" response to a negative item, (e.g., "Is undesirable because extra preparation time takes away from research") and a "strongly agree" to a positive item (e.g., "Results in increased rewards for faculty member") are both highly favorable beliefs, and therefore, would both be scaled as five. Hence, the higher the overall attitude score, the more favorable a respondent's attitude is towards integrating international topics into the curriculum. The mean (standard deviation) attitude was 59.2 (7.4) of a possible 90 points. To check the internal consistency of the scale, an item analysis was conducted. All individual items were significantly correlated with the overall sum ($p<0.001$), with correlations ranging from a low of 0.25 to a high of 0.58.

The association between the attitude score and the respondent's perception of what is being covered and what should be covered was then measured. The correlation between the overall attitude score and the overall measure of perceived actual coverage was statistically significant ($p<0.01$) with $r=0.29$. Similarly, the overall attitude score was significantly correlated ($r=0.28$ with $p<0.01$) with the overall measure of desired coverage. A t-test showed that AAA international section members had a significantly ($p<0.01$) more favorable attitude towards integrating international topics with a mean (standard deviation) of 60.5 (7.3) than department chairs with a mean (standard deviation) of 57.7 (7.2). Significant differences between the AAA international section members and the department chairs also existed in many of the individual salient beliefs which comprise the overall attitude. For example, t-tests indicated that, in comparison with chairs, international section members believed the integration of international topic broadens a faculty member's academic interests, is likely to provide expertise to the local community in international accounting issues, is less likely to remove relevant material from accounting courses (all $p<0.01$), and results in more interesting class discussions ($p<0.05$).

To investigate further the effect of attitude on course coverage. we isolated the respondents who were in the upper and lower quartiles of the attitude score. This identifies those with most favorable and least favorable attitudes towards the benefits of international coverage. A Mann-Whitney U comparison of the two groups revealed that the most favorable attitude group reported significantly greater actual and desired coverage (both $p<0.05$) than the least favorable attitude group.

The most important step in the attitude/behavior methodology for this study is the examination of the individual statements comprising the attitude score. This will allow us to fulfill the major objective of this study which is to identify the salient beliefs which discriminate course coverage of international topics. Comparisons for each of the attitude questions were conducted based on both current and desired coverage (see Table 3). As expected, subjects who perceive a need for greater coverage have more favorable beliefs as to the consequences of such coverage.

In an examination of responses from the upper and lower quartiles to questions as to current coverage, significant differences in beliefs were found to exist concerning the difficulty of accomplishing international coverage for the following reasons; lack of colleagues with similar interests, not preparing students for professional

Table 3. Measures of beliefs as a function of course coverage: Comparison of mean belief responses for upper and lower quartile on course coverage

Belief statements	Mean belief response			
	Is covered		Should be covered	
	Upper Quartile	Lower Quartile	Upper Quartile	Lower Quartile
Integrating international topics into undergraduate accounting courses:				
1. Makes students more desirable in the marketplace	3.38	3.48	3.77	3.38**
2. Results in more interesting class discussions	3.83	3.65	3.91	3.38***
3. Is undesirable because extra preparation time takes away from research	1.87	2.05	2.09	2.14
4. Is difficult to accomplish because of lack of examples in existing textbooks	3.42	3.87*	3.41	3.89*
5. Is difficult to accomplish because of lack of available prepared examination questions	2.83	3.52***	3.15	3.24
6. Broadens a faculty member's range of general and academic interests	4.00	4.04	4.05	3.95
7. Helps schools either achieve or maintain AACSB accreditation	4.00	3.74	3.68	3.76
8. Doesn't prepare students for professional examinations (e.g. CPA, CMA)	3.04	3.73**	3.41	3.75*
9. Results in a more global orientation on part of students	4.17	4.26	4.23	4.05
10. Results in increased rewards for faculty member (e.g. promotion, tenure, and compensation)	2.17	2.35	2.45	2.33
11. Will help the local commmity by providing expertise in international accounting issues	2.78	3.13	3.23	2.90
12. Is difficult to accomplish because of lack of competence of accounting faculty	3.08	3.91***	3.82	3.71
13. Sensitizes students to differences between United States and other countries in form and content of financial statements	4.04	4.13	4.09	4.00
14. Is perceived by my colleagues not to be relevant to an accounting program	2.46	3.00**	2.73	3.19*
15. Results in removing existing relevant material from accounting courses	2.62	2.96	2.50	3.40***
16. Is difficult to achieve because of lack of colleagues with similar interests	2.79	3.83***	3.41	3.57
17. Is beneficial because it expands publishable research opportunities for faculty	3.79	3.70	3.82	3.43*
18. Is difficult because of lack of access to international experts from industry	2.75	3.35**	3.14	3.52*

Significance of the difference between belief responses of upper and lower coverage quartiles (one-tailed tests) is identified as follows: * $p<0.10$; ** $p<0.05$; *** $p<0.01$

examinations lack of competence of faculty (all $p<0.01$), lack of prepared examination questions, a perception by colleagues that it is not relevant to accounting programs, and lack of access to international experts from industry (all $p<0.05$), is difficult to accomplish because of lack of textbook examples, and helps schools achieve or maintain AACSB accreditation (both $p<0.10$). In all tests, the group which reported greater coverage also perceived greater benefits, fewer obstacles, and fewer negative consequences. Similarly, when examining differences in individual beliefs by upper and lower quartiles of responses on desired covered, Table 3 shows that the upper quartile group believed that integrating international topics was less likely to remove

relevant material from accounting courses, that it would result in more interesting class discussions (both $p<0.01$), it would make students more attractive in the marketplace ($p<0.05$), is less difficult to accomplish because of lack of textbook examples, or lack of preparation for students taking professional examinations, expands publishable research opportunities, is less likely to be perceived by colleagues as not being relevant, and is not as difficult because of lack of access to international experts from industry ($p<0.10$).

In a related area, a perception of the lack of rewards for faculty who integrate international issues is evident. For the statement that integrating international topics will result in increased rewards for faculty members (e.g., promotion, tenure, and compensation), 62% of the respondents indicated that they strongly disagreed or disagreed; only 8% strongly agreed or agreed. This empirically confirms what many business educators intuitively believe, that faculty receive little or no tangible rewards for incorporating non-traditional and non-rule based topics (e.g., international issues) into the curriculum. These results are consistent with the Carnegie Commission's[19] observation that the existing academic reward structure is inappropriate for motivating faculty to go beyond a rule-based curriculum.

The commitment of a respondent's accounting department to integrating international issues was suggested by the pretest to be an important factor in current and future international coverage. Using a five-point Likert Scale anchored by "Strongly disagree" (=1) and "Strongly agree" (=5), the measure of current commitment to internationalize undergraduate accounting education, 3.56 (s.d. 0.97) was not significantly different from that of the past three years, 3.62 (0.96), nor from what is expected to be the commitment over the next three years, 3.71 (0.90). A comparison of the upper and lower quartiles of measures of current course coverage and desired coverage suggests that the greater a department's commitment to internationalizing the curriculum, the greater the international coverage. In both cases, a *t*-test found significantly ($p<0.05$) greater perceived commitment in the departments of respondents who were in the upper quartile group of course coverage compared to the lower quartile No significant differences were found in perceived commitment between department chairs and international section members.

Factors Affecting Interest in International Topics

As part of the background data, we asked subjects of the importance of various global, economic, and academic events and trends that could have increased interest it including international topics in accounting courses. For each of 13 factors identified from a pre-test, subjects were asked to respond on a five-point scale anchored by "Strongly disagree" (=1) and "Strongly agree" (=5) whether the event or trend had increased interest among their accounting colleagues (e.g., "1992 and the European Community," "Glasnost/Perestroika in the USSR," "AACSB interest in internationalizing curricula").

The interest of the AACSB was perceived to be the most important factor in increasing international interest with a mean (standard deviation) of 3.82 (0.97). Approximately 70% of the respondents indicated that they either agreed or strongly agreed with the statement. There was a significant difference ($p<0.001$) in the effect

of the AACSB's interest among the AACSB-accredited respondents (a mean of 4.02 with a standard deviation of 0.86 and the non-AACSB respondents (a mean of 3.54 and a standard deviation of 1.05). However, those intending to apply felt even more strongly that the AACSB interest had an important effect with a mean (standard deviation) of 4.19 (0.70) as compared to 3.02 (0.95) for those not intending to apply. This reinforces the need to at least examine the intentions of non-AACSB schools when investigating the AACSB/non-AACSB variable in accounting studies.

Other events and trends reported as important included "the rise of global competition", "Japanese manufacturing techniques", and "the globalization of capital markets for portfolio investments". The only difference in perception of the importance of events between chairs and international section members was for the AACSB question in which the latter group believed that the AACSB had a significantly ($p<0.05$) greater effect on increasing interest in integrating international topics.

Discussion

This study makes several contributions to our understanding of teaching international topics and to research concerning accounting education issues in general. In our examination of factors affecting the integration of international topics within the functional area of accounting, we found a significant relationship between faculty attitudes towards the value of integrating international topics into courses and the extent of both current and desired coverage. These findings led to the most important contribution of this study, namely the identification of those salient attitudinal beliefs which discriminate coverage of international topics. Faculty in schools where there is greater coverage are less likely to believe that there is a lack of colleagues with similar interests, a lack of prepared exam questions, a lack of textbook examples, and that faculty lack international competence. The salient beliefs which were significantly correlated with desired coverage of international topics include beliefs that increased international coverage would better prepare students and increase their marketability, would lead to more interesting class discussions, would expand publishable research opportunities, would not remove relevant material from courses, and is difficult to accomplish because of lack of textbook examples or lack of access to international experts from industry. As expected, the members of the AAA international section had a more positive attitude towards course coverage and wanted more international coverage than accounting department chairs.

Addressing the attitudes of faculty members can help pave the way for more coverage. Departmental discussions designed to suggest ways of introducing material should include a "sensitizing" component which includes addressing faculties' attitudes towards the outcomes and consequences of integrating international topics. For example, one salient belief that discriminated coverage was that integrating international topics would remove "relevant" material from existing accounting courses. Departments should address faculty concerns on this issue by engaging in a discussion to identify the ways in which international topics can be included without removal

of relevant existing topics. Our results suggest that schools which have greater international coverage have already addressed this question.

The findings of this study have implications for efforts being taken by the AACSB and the AAA to provide guidelines and teaching resources for functional business school faculty who wish to introduce international topics into their courses. We found that the AACSB has a strong influence in the efforts of functional business faculty to internationalize their courses. In this study, the interest of AACSB was ranked as the most important factor affecting interest in integrating international topics in accounting. Our results suggest that the sponsorship of short programs by bodies such as the AACSB and the AAA could be an effective approach to improve course coverage of international topics. To be effective in persuading faculty to incorporate international topics, these programs should address the salient beliefs which significantly discriminate higher international coverage from lower coverage. Discussions should include the market for internationally trained students, guidance for class discussion of international topics, and should provide precise guidelines for course restructuring that demonstrate that the introduction of international topics need not cause other relevant functional material to be excluded.

Other salient beliefs that need to be addressed in these sessions are (1) the perceived obstacles of lack of prepared examination questions and (2) that integrating international topics does not prepare students for professional examinations. Since undergraduate accounting textbooks often adapt sample test questions from professional examinations, the importance of these salient beliefs raises an issue about how accounting academics can influence the content and structure of professional examinations. For example, the Report of the Changes in Accounting Education Committee[20] strongly criticized the overwhelming influence of the CPA exam on the accounting curriculum including what courses to teach, topics to cover and types of exams which are administered. To lessen this influence, the report recommended diminished reliance on CPA questions for classroom quizzes and examinations, that the professional exam be secured, and that the National Association of State Boards of Accountancy refrain from publishing pass rates by schools and programs.

One finding confirms the intuitive belief that there are no tangible rewards provided (e.g., promotion, tenure, compensation) for faculty who make the commitment to more international coverage in their courses. This lack of any systematic external support in the current reward structure of academia could seriously impede the current efforts to integrate international topics. The negative effects of the existing reward structure could explain in part why both groups (chairpersons and international section members) expressed a strong belief that more international issues should be covered in every single course and topic examined.

This study also has methodological implications for accounting education research. First, partitioning respondents from schools without AACSB accreditation by intention to apply in the near future should be of benefit to those interested in investigating the effects of AACSB membership as an explanatory variable, Faculty in schools intending to apply will be tailoring their programs to fit the required standards and, hence, should share many of the beliefs held in accredited schools. Some recent accounting education studies that have investigated the AACSB variable include Poe and Viator[21] (who looked at criteria used to evaluate faculty performance) Cohen

and Pant[22] (who examined coverage of ethics in the curriculum) and Stout and Schweikart[23] (who surveyed international accounting coverage). The minimal effect for the AACSB variable reported in these studies could be attributed in part to a lack of control for intention to apply.

Another methodological contribution of this paper is the adaptation of the attitude/behavior literature from psychology into the accounting education arena. The link between attitude and behavior could be exploited by accounting education researchers in areas as diverse as student choice of major to faculty choice of academic institution. For example, this methodology could help identify and understand the salient beliefs about the outcomes and consequences associated with choosing accounting as a major. Our methodology could also enable accounting faculty to develop a curriculum that will attract and retain the best possible undergraduate students.

With regard to the findings on actual and desired coverage, the difference between what "is" and "should be" covered in a particular course could be conceived as an indication of respondents' dissatisfaction with the existing level of coverage. An examination of this difference within individual topics within courses provides more specific indication of the perceived need for greater international coverage. In accounting courses, auditing showed the highest dissatisfaction, followed closely by accounting information systems. The dissatisfaction with coverage in these courses may reflect increased faculty awareness of the importance of international coverage given the recent mergers among public accounting firms and their attempts to internationalize their practices. An examination of the difference between what "is" and "should be" covered in individual topics within courses provides more specific indication of the perceived need for greater international coverage. "Comparative accounting standards" in the theory course showed the highest difference in scores, but the need for more coverage of this topic was also very evident in auditing and advanced accounting, Respondents also reported a need for more coverage of "Control of MNCs" in both the cost accounting and information systems courses. The need for more international coverage of auditing and tax in their respective courses was also notable.

Providing adequate coverage in these topics is a formidable challenge for accounting faculty not trained in international business. These topics require understanding of the complexity of the international business environment. This includes the historical and cultural diversity of nations out of which has evolved today's diversity of accounting and auditing standards and tax laws. This cultural and legal diversity is also at the root of many of the unique control, motivation, and performance measurement problems in MNC's.

One possible solution to faculty perceptions regarding the difficulties of increased coverage is to have one or two class sessions taught by an international business faculty member who would discuss cross-national cultural and institutional differences. Accounting faculty could then relate these differences to choices of accounting standards in different countries. This should lead students to the recognition that diverse practices exist and that local practice is neither universal nor superior. An alternative approach, also requiring less faculty preparation time, would be to invite a speaker with international accounting experience from a local multinational firm (which need not be American). In many cases, the bigger accounting firms are very

willing to provide an international expert. Both of these approaches represent relatively painless and interesting means of increasing the accounting faculty's ability to integrate international issues.

While accounting curricula have been slow to incorporate international topics to date, there has been some shift in academics' thinking towards the view that business education should emphasize skills for life-long learning, and that curricula should be adjusted to match the increasing level of skills required for professionals. For example, the Accounting Education Change Commission has been commissioned by the AAA "to foster changes in the academic preparation of accountants consistent with the goal of improving their capabilities for successful careers in practice".[24] However, such improvements to business schools will not come easily. University constraints including faculty standards, reward structures, institutional inertia, and the focus of Ph.D. programs have provided little external motivation for individual faculty to effect such improvements in their curricula. The key to introducing international issues within undergraduate business programs is to facilitate their integration within functional courses. We cannot rely upon the stand-alone international business or international accounting course as the only source of international coverage. Otherwise, we risk making the fatal mistake of encouraging our students to compartmentalize international issues as important only outside their functional disciplines.

This study suggests that groups like the Change Commission, the AAA, and accounting departments can encourage faculty to introduce the international dimension of accounting into their courses. Such encouragement should take the form of providing positive external outcomes which will lead to positive attitudes towards the consequences of internationalizing the curriculum. These positive attitudes towards internationalizing the accounting curriculum should lead to greater international coverage.

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The Effect of Published Corporate Financial Reports on Stock Trading Volume in Thin Markets: A Study of Saudi Arabia

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Key words: Saudi Arabia; Published financial reports; Stock trading volume

Abstract: *The release of annual corporate financial reports seems to have little effect on share trading volume in the Saudi stock market. Possible explanations for this non-reaction vary from the thinness of the Saudi market, the heavy government influence on corporations, a possible lagged reaction to news, and to the country's economic reliance on oil.*

Not only accountants, but also economists and finance researchers have become interested in the relationship between stock prices and trading volume as a joint product of a single market mechanism, and the possible manner new information affects both price and volume. In this study, we focus on the effect of published corporate financial reports on stock trading volume in Saudi Arabia (KSA). The purpose of this work is to answer the following questions: (1) does the release of corporate annual financial reports have a significant effect on stock trading volume in Saudi Arabia?; and (2) does there appear to be a notable difference between the share price reaction and stock trading volume reaction in the Saudi stock market?

We find that the release of earnings information has little effect on KSA market trading. This agrees with recent findings concerning the behavior of stock prices near the publication dates of financial statements; that is, these announcements do not seem to affect significantly either market prices or trading volumes. To support and analyze these findings, the remainder of this paper is divided into four sections. The first section reviews some previous research on trading volume and discusses the motivation for such a study on Saudi firms. The second section describes the data used in this study, the third section develops the research methodology and results, and the final section discusses those results and concludes the paper.

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Background Research

Both economists and finance researchers have long been interested in the relationship between stock prices and the volume of market transactions, and how new information affects both price and volume. This set of works includes Granger and Morgenstern (1963), Ying (1966), Crouch (1970), Epps (1975), and Karpoff (1986, 1987). They are motivated by the view that price and trading volume in the stock market are a joint product of a single market mechanism and that the volume of these transactions affects the overall level of economic activity and in certain markets affects the stock price (Ying, 1966). In the accounting field, the first of such studies is the seminal work of Beaver (1968), who explores the effect of the information content of annual earnings announcements on both share prices and trading volume in the New York Stock Exchange (NYSE). Beaver assumed if financial reports contain new information that changes investor expectations of a firm, that information will be reflected in both the firm's share price and trading volume. He found the trading volume is 33 per cent higher during the weeks of the earnings announcements than during non-reporting weeks.

Kiger (1972) investigated the impact of the release of the interim report on the price and volume of stock traded on the NYSE. He found that the average trading volume adjusted for market fluctuations is greater during the period in which the quarterly earnings announcement is made than during the non-announcement period. Morse (1982) examined price behavior and trading volume in the five days before and following the earnings announcement. He found trading volume was greater than normal in seven of nine cases the day before the announcement. Bamber (1986) examined the associations between unexpected earnings, firm size and trading volume. She concluded that trading reaction to unusual earnings announcements is greater for smaller firms than for large firms.

Deakin et al. (1974) examined both price and volume reaction to the release of tax administration information for firms traded on the Tokyo Stock Exchange (TSE). They found the stock volume activity demonstrated results similar to those shown by Beaver. Lev and Yahalomi (1972) examined the average weekly volume for 25 weeks surrounding the date of release of financial statements of stocks on the Tel Aviv Stock Exchange. They observed no significant volume reaction to the release of the financial statements.

From the above studies one may infer that, among other things, it is only the major markets (i.e., the NYSE and TSE) for which information releases cause a change in investor expectations, thus significantly changing trading volume. Since the KSA has not only a very small but also a fairly new market, one would expect no measurable reaction to occur. Why, then, would one bother to perform an analysis of trade volume changes in such a market?

The interesting point of the KSA is not the lack of investor reaction to earnings news but rather how the market is comprised to dampen the investor reaction. This market composition, particularly with respect to firm ownership, is discussed further in the next section.

Data Description

The Saudi stock market, which only became officially regulated in 1984, has approximately 40 publicly traded firms. Of these, this paper studied the trading volume for 28 corporations in 1985 and 20 in 1986, based on the following criteria: (1) weekly trading volumes are published and available; (2) the annual financial reports of the firms are published in a local Saudi newspaper at the end of the fiscal year; (3) the corporation must be registered in the General Administration for Companies (Ministry of Commerce); and (4) its shares must be traded in the Saudi stock market.

Because of the small sample size, no restrictions have been placed on the dates of the firms' fiscal years or the dates of the published financial reports. Weekly trading volumes for the eight weeks before and after each firm's financial report were reported by a local Saudi newspaper and a publication of the Share Department of Monetary Funds. We added these totals for all firms and divided by the number of firms with information for that week (28 for 1985 and 20 in 1986) times the number of trading days per week to determine a weekly average trading volume. This may be expressed as:

$$\text{AVEVOL(all)} = \left(\sum_{i=1}^{N_j} \text{VOL}_i\right) \Big/ \left(\text{N}_j \times \text{D}_j\right) \qquad \text{for } \text{N}_j = 28 \text{ or } 20$$

where VOL_i is firm i's total trading volume for week j, and D_j is the number of trading days in week j.

After calculating this statistic for all firms, the data set was divided into several groups to test whether specific firm attributes affect the link between information and volume reaction. These groups include firms with earnings increases or decreases from 1985 to 1986 (AVEVOL (earn)), and firms whose dividends increased, decrease or remain unchanged over those two years (AVEVOL(div)). They are also divided between those companies which the government does or does not subsidize (AVEVOL(sub/nosub)). Some Saudi firms require a minimum profit for their shareholders, which the government guarantees. It was thought that shareholders of those subsidized firms would react less to earnings announcements than.would the shareholders of the non-subsidized firms because bad news would not change their minimum expectations.

The Saudi government also acts as a major shareholder in some firms, owning from 20 to 70 per cent of a company's outstanding stock. For these firms with a government contribution, it was believed that shareholder reaction to the release of financial statements would be less volatile than if the firms were held only by individual private investors since the government probably does not react as an ordinary individual. Its motivation for holding stock is different in that it is the government in Saudi Arabia that receives oil revenues and reinvests these in its own companies to enhance the national economy rather than to invest to earn a profit. Thus, firms were also divided into those with and without a government contribution (AVEVOL(govt/nogovt)).

The weekly volumes were also grouped by economic sector (AVEOL(fin/ag/ serv/ ind)). Table 1 shows the number of firms from each sector. Finally, we examined

Table 1. Sample of Saudi corporations broken down by sector

	All firms in 1985	All firms in 1986	Firms appearing in both 1985 and 1986
Financial (Banks)	7	7	6
Industrial	10	6	6
Service	8	4	4
Agriculture	3	3	2
Total	28	20	18

the 18 firms that meet our selection criteria in both 1985 and 1986 (AVEVOL(both)). Data for all these divisions come primarily from published annual financial reports.

Research Methods and Results

Figures 1 through 7 indicate all the subgroups of AVEVOL(.) for each of the two years 1985 and 1986. Each graph shows AVEVOL(.) for the eight weeks before (–8 through –1) and eight after (0 through 7) the publishing of the firm's financial statements. The report itself is issued sometime between points –1 and 0. From these graphs one can see that while the average weekly trading volumes are rather volatile, the change in volume from week to week does not seem to fit a regular pattern. More specifically, there appears to be little correlation between the announcement date and an increase in trading volume regardless of which subset of AVEVOL(.) one studies. Note for example that in Figure 1 the 1985 volume seems to increase a little from week –1 to week 0, but the 1986 volume is clearly more volatile overall although it actually decreases between weeks –1 and 0.

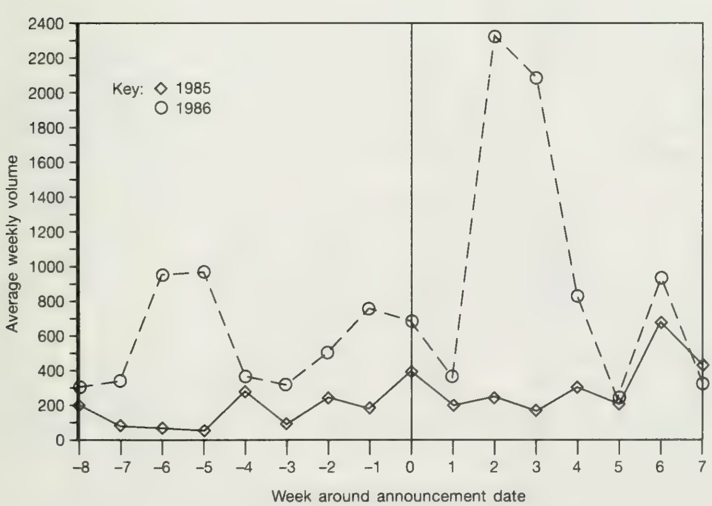

Fig. 1. Average weekly trade volumes, 1985 and 1986.

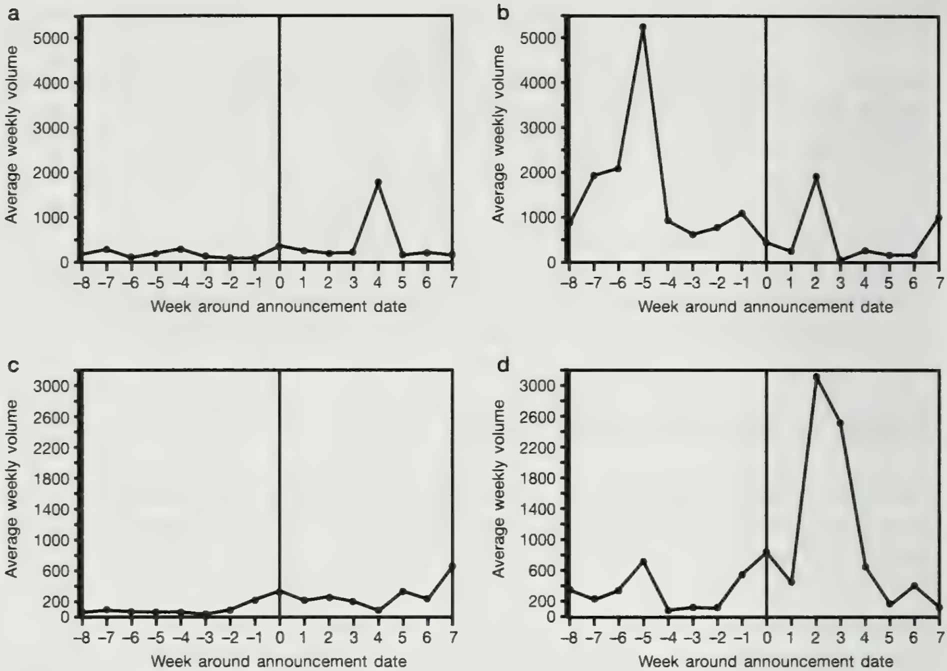

Fig. 2. **a** Firms with increasing profits, 1985; **b** firms with increasing profits, 1986; **c** firms with decreasing profits, 1985; **d** firms with decreasing profits, 1986.

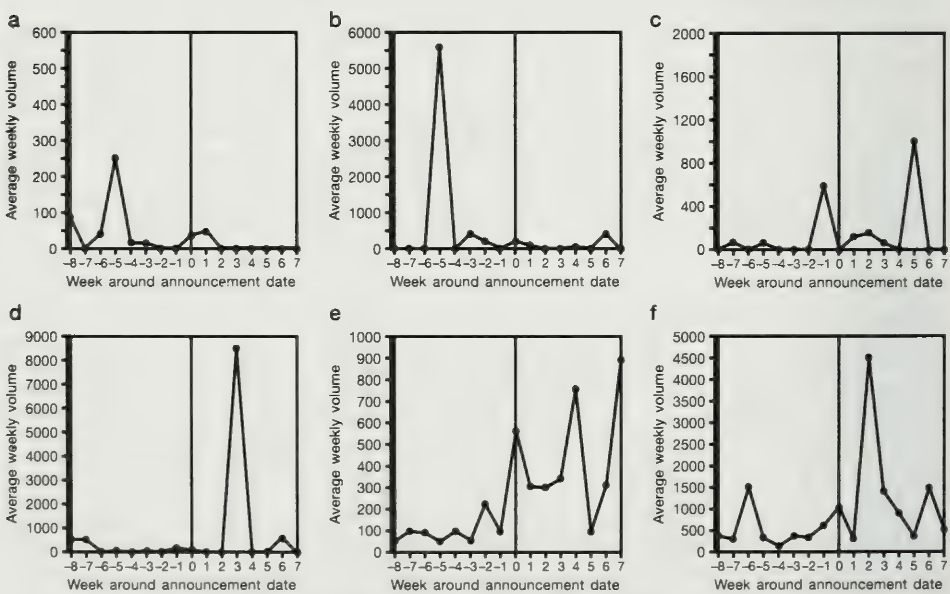

Fig. 3. **a** Firms with increasing dividends, 1985; **b** firms with increasing dividends, 1986; **c** firms with decreasing dividends, 1985; **d** firms with decreasing dividends, 1986; **e** firms with no change in dividends, 1985; **f** firms with no change in dividends, 1986.

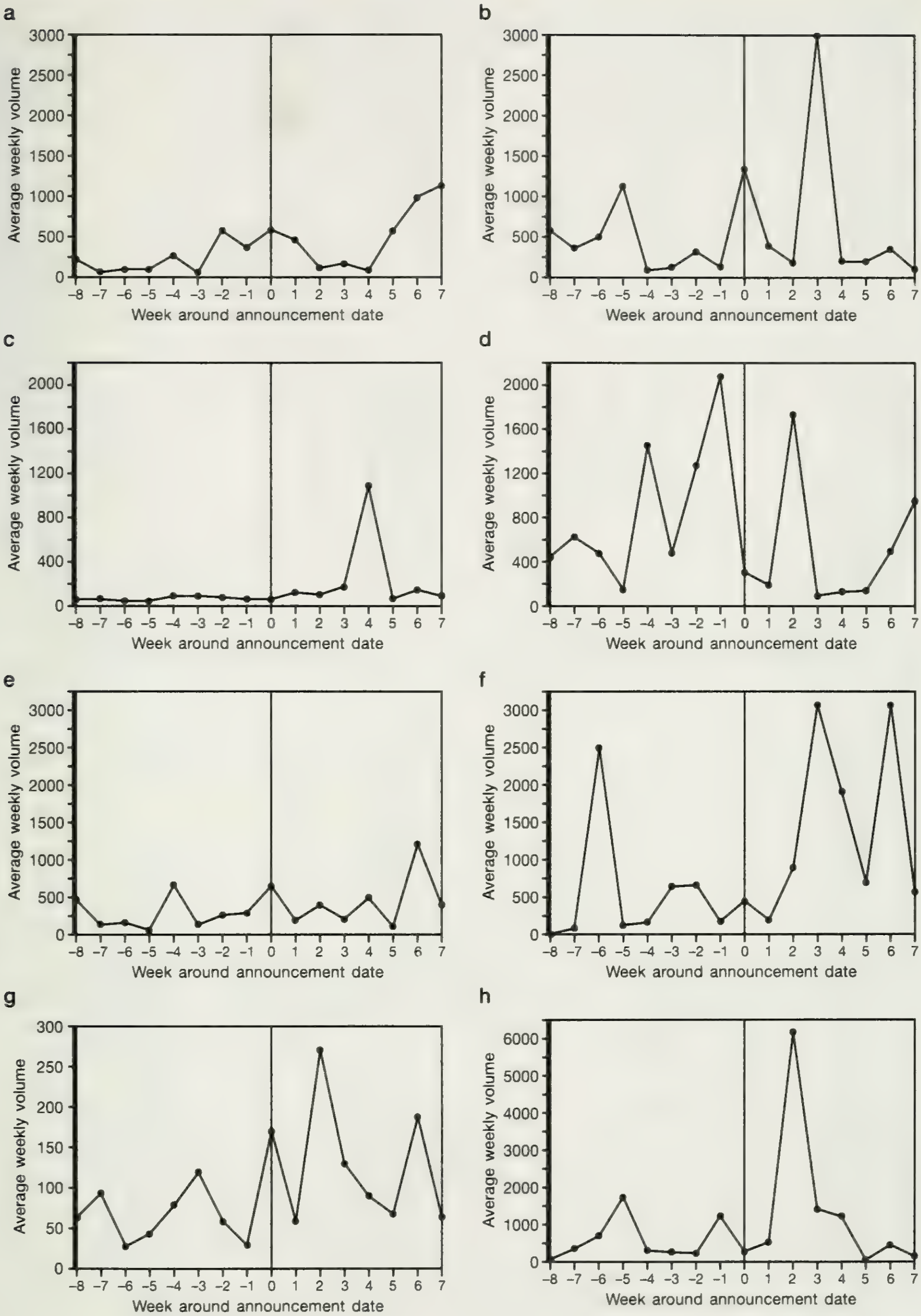

Fig. 4. **a** Financial sector, 1985; **b** financial sector, 1986; **c** agricultural sector, 1985; **d** agricultural sector, 1986; **e** service sector, 1985; **f** service sector, 1986; **g** industrial sector, 1985; **h** industrial sector, 1986.

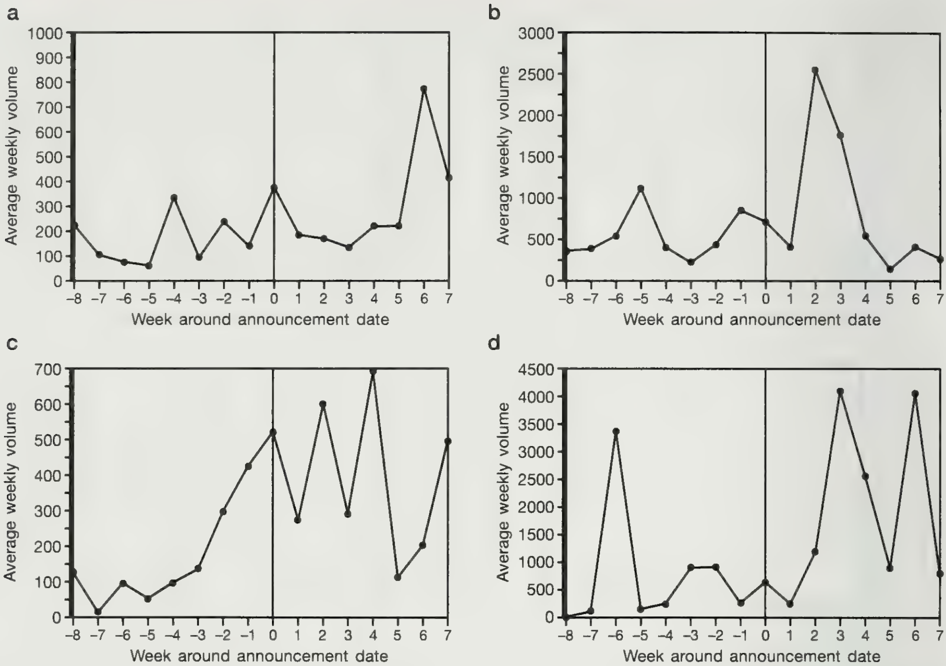

Fig. 5. **a** Firms not subsidized, 1985; **b** firms not subsidized, 1986; **c** subsidized forms, 1985; **d** subsidized firms, 1986.

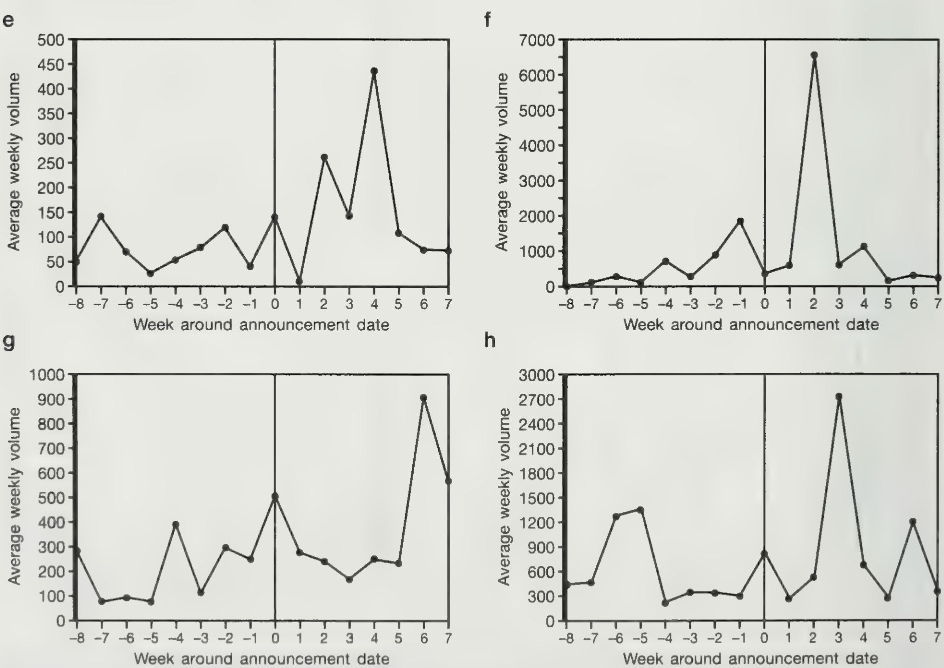

Fig. 6. **a** Firms with government contribution, 1985; **b** firms with government contribution, 1986; **c** firms with no government contribution, 1985; **d** firms with no government contribution, 1986.

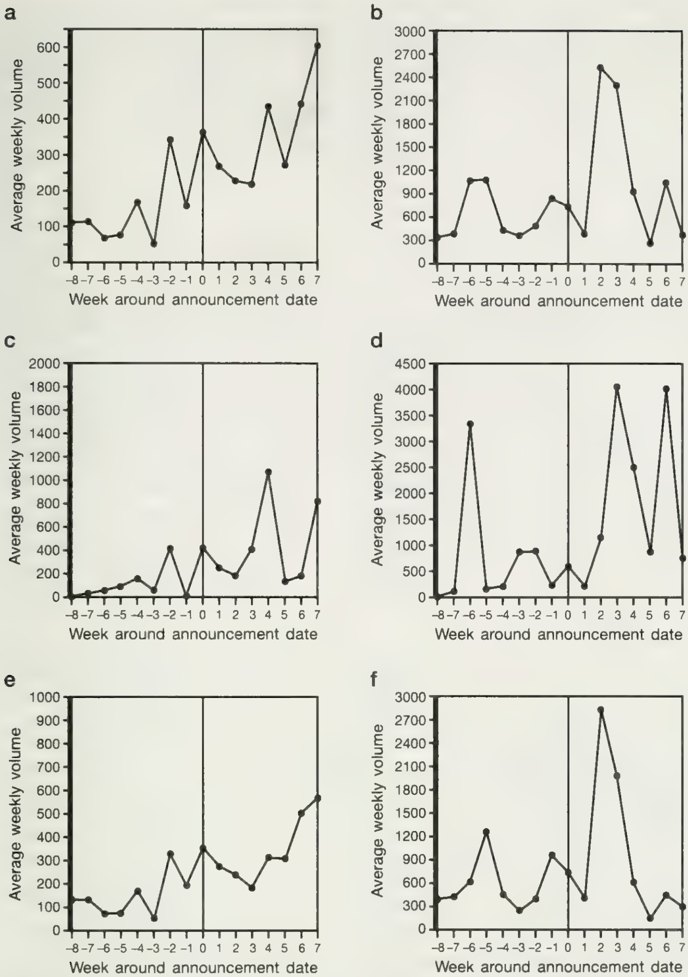

Fig. 7. **a, b** Firms that exist in both 1985 and 1986: **a** 1985 data, **b** 1986 data. **c, d** Subsidized firms existing in both 1985 and 1986: **c** 1985 data, **d** 1986 data. **e, f** Firms not subsidized, existing in both 1985 and 1986: **e** 1985 data, **f** 1986 data.

Table 2 lists for each of these subcategories of AVEVOL(.) both the week and amount of highest average trade volume over these 16 weeks for 1985 and 1986. Table 2 shows clearly that the peak volumes correspond to no regular pattern of announcement dates. In only one case does the greatest volume of trade occur in the week before the earnings announcement (week –1), and in no case does it occur in either the week of (0) or week following (+1) the announcement. However, our research is not based on the interpretation of the graphs alone.

For a few interesting subcategories of firms, including AVEVOL(all), AVEVOL(nosub), AVEVOL(nogovt) and AVEVOL(both), we also performed a simple statistical analysis to test the hypothesis that the release of financial information in KSA does not significantly affect trading volume. For trade volume levels

Table 2 Volume reactions to published financial reports

Firm description	Number of firms	Average weekly trade volume around announcement date (week 0)	Week and volume of highest trade activity		Figure number
			Week	Volume	
1. All firms					
All firms, 1985	28	401.16	6	688.44	1a
All firms, 1986	20	678.96	2	2327.26	1b
2. Earnings announcement					
Increasing profits, 1985	2	360.50	4	1727.58	2a
Increasing profits, 1986	2	410.91	–5	5227.83	2b
Decreasing profits, 1985	12	328.33	7	620.16	2c
Decreasing profits, 1986	12	804.95	2	3056.27	2d
3. Dividend announcement					
Dividend increased, 1985	1	36.33	-5	250.00	3a
Dividend increased, 1986	1	209.00	-5	5599.33	3b
Dividend decreased, 1985	3	0.00	5	1014.33	3c
Dividend decreased, 1986	3	124.22	3	8584.10	3d
No change in dividends, 1985	9	567.37	4	765.92	3e
No change in dividends, 1986	9	1042.46	2	4535.59	3f
4. Firms subsidized and not subsidized					
Firms subsidized, 1985	5	518.63	4	691.33	4a
Firms subsidized, 1986	3	600.83	3	4047.72	4b
Firms not subsidized, 1985	23	375.63	6	770.97	4c
Firms not subsidized, 1986	17	692.75	2	2534.59	4d
5. Firms with government contribution and no government contribution					
Firms with government contribution, 1985	8	142.62	4	435.85	5a
Firms with government contribution, 1986	6	343.47	2	6534.52	5b
No government contribution, 1985	20	504.58	6	904.95	5c
No government contribution, 1986	14	822.75	3	2712.75	5d
6. Economic sector					
Financial sector, 1985	7	598.45	7	1141.80	6a
Financial sector, 1986	7	1345.88	3	2964.73	6b
Industrial sector, 1985	10	168.31	2	269.88	6c
Industrial sector, 1986	6	250.83	2	6129.88	6d
Service sector, 1985	8	649.97	6	1200.77	6e
Service sector, 1986	4	450.62	3	3054.12	6f
Agricultural sector, 1985	3	53.50	4	1054.22	6g
Agricultural sector, 1986	3	283.55	–1	2054.05	6h
7. Similar type of firms					
Firms that exist in both 1985, 1986 (1985)	18	361.67	7	599.69	7a
Firms that exist in both 1985, 1986 (1986)	18	725.22	2	2534.45	7b
Similar type subsidized, 1985	3	422.77	4	1066.27	7d
Similar type subsidized, 1986	3	600.83	3	4047.72	7e
Similar type not subsidized, 1985	15	349.45	7	557.47	7f
Similar type not subsidized, 1986	15	750.10	2	2810.86	7g

(AVEVOL(.)) and changes in trading volume from week to week (AVEVOL(.)t – AVEVOL(.) t–1), we calculated a simple average for the weeks –8 through –2. Calling these MEANL and MEANC, the standard deviations for levels and changes were then calculated and a test statistic derived. For levels we had:

$$STAT_L = (AVEVOL(.)_0 - MEAN_L)/STDDEV_L$$

and for changes:

$$STAT_C = ([AVEVOL(.)_0 - AVEVOL(.)_{-1}] - MEAN_C)/STDDEV_C$$

Table 3 reports these data for the four subdivisions of the data. Note that none of these statistics for either levels or changes appear significant. This strongly supports the hypothesis that the release of annual financial information for KSA firms does not affect investor beliefs and actions. The 1985 data are higher, however, for both levels and changes than the 1986 data although the overall volume for the latter year is higher. This indicates that perhaps in the first year of the regulated market investors may have felt that the release of the financial statements brought them new information. But in the second year they realized that these financial statements do not contain the useful information they had anticipated in the prior year. These results are discussed further in the next section.

Discussion and Conclusion

The hypothesis tested in this paper is that the release of annual corporate financial reports does not significantly affect trading volume in Saudi Arabia. From prior literature on trading volumes one sees, at least in major markets a strange investor reaction to the release of earnings news, both annual and quarterly. These major markets also revealed strong price reaction to this information. KSA, however, has a very thin market. A recent study on price reaction to published financial reports in KSA (Abdelsalam and Satin, 1988) supports the claim that the release of earnings information has no notable effect on share price. A price change is considered a market reaction whereas a trading volume change is considered to be a response to individual investors' changes in beliefs. One would not necessarily rule out a measurable change in volume, given no significant change in price, near the announcement date.

Thus, it is not totally unnecessary to perform a trade volume reaction study on

Table 3. Level and change statistics for the average volumes of all firms, those with no government contribution, those not subsidized, and those existing in both 1985 and 1986.

Subset	Statistic			
	Levels		Changes	
	1985	1986	1985	1986
AVEVOL(all)	1.847	0.505	1.418	–0.307
AVEVOL(nogovt)	2.611	0.467	1.231	0.981
AVEVOL(nosub)	2.194	0.740	1.402	–0.428
AVEVOL(both)	2.479	0.458	1.288	–0.344

the KSA stock market. Though we find evidence clearly supporting our hypothesis, particularly in 1986, there is another reason such a study is interesting. Examining individual investor reaction to earnings news might aid in narrowing the list of reasons why the Saudi market does not seem to react to financial information.

One obvious reason for a lack of both market and individual reaction is the smallness of the Saudi market, both in number of firms and in number of investors. The actions of one large investor or only one firm with many shares outstanding could counter the effects of all other investors in a given year. Another problem related to the size of the market is that we were unable to abstract a "market volume reaction" from the overall average volumes with so few sample firms. Because each firm's announcement comes at a different date, this means we are measuring the trading volumes associated not just with the information release but also with any overall market influences. Thus, we have a measurement problem.

The fact that this is a newly regulated market may also add noise to our tests; in fact, at the time of this study the KSA had not yet established reporting and auditing standards. (They were set in 1986.) That could have caused investors individually to react differently to the release of financial information, not only across investors but also across time as they learned exactly how useful that news could be. Because of leaks in the news and the diluting effect of government subsidies and government ownership, financial reports may not really contain new information for investors. However, early in the market regulation stage, when financial reports for all firms are first required to be published in local newspapers the investors may not realize this. As was mentioned in the previous section, this may account for what seems to be an insignificant but definite jump in volume near week 0 in 1985, but none in 1986 when the investors may have formed some opinions.

Reiterating the concept of government influence, the fact that some firms are subsidized or partially owned by the government ought to reduce both individual investor reaction and total market reaction to earnings news. The investors in subsidized firms are not as concerned with their profits; the government as a shareholder has more interest in aiding its own economy than in receiving dividends. This may help explain the behavior of AVEVOL(all) or (both), though not AVEVOL(nosub) or (nogovt). The smallness of the market discussed earlier in this section may influence those subgroups.

That the government and economy are so strongly tied to oil may also have a confounding effect on trade volume as well as on prices. For example, suppose a firm announces an increase in profits, but the overall economy appears bleak because oil prices are dropping. Then investors may not be willing to accept the successful firm's financial statement information.

Figures 1 through 7 and Table 3 also exhibit some small evidence that KSA investors have a delayed reaction to the earnings announcement. In 9 of the 17 subcategories the highest trade volume occurs in the second week after the announcement, and in 14 subcategories the highest volume follows sometime after week 0 (including week +2). In 1985 the highest trade volume proceeds week 0 only once. This again may indicate a possible delayed reaction to the earnings news. We have not tested the trade volumes following week 0 for significance. This is an avenue of possible further study.

Two other topics for future research may also derive from this paper. First, we have examined only two years of trading volume reactions for the KSA. While Lev and Yahalomi reached their conclusion using only 1968 data, most studies consider information effects over a series of years or quarters. Our study should be extended for a few years particularly since KSA now also has established accounting and auditing standards. Second, though we found no evidence of a significant average volume reaction near week 0 and have not tested the significance of the post-announcement period average volume reactions, we ought perhaps not group companies by specific attributes to determine if averages over firms in those categories react to earnings news. Rather, we could study those individual firms that do seem to react to the release of financial information and then try to identify their common attributes. This technique could be used for a price study as well as a trade volume study.

The KSA is not a major market in terms of many traders and many firms. Thus, its reaction to earnings news releases is, as expected, small. However, it is an interesting stock market that is young, newly regulated, strongly tied to one product, and heavily influenced by the government. It holds a great many interesting attributes for further market studies.

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Book Reviews

The British Accounting Review Research Register *edited by K.P. Gee and R.H. Gray. Academic Press, London, 4th edn., 1990*

Communications among higher educational institutions worldwide has played a major role in the globalization of business. The increased internationalization of world markets and the ultimate removal of national boundaries in the countries of the EEC and the Eastern Bloc have increased communications, not only among institutions, but also among individuals. The strength of the British Accounting Review Research Register (BAR) lies in its role of providing information concerning accounting and finance faculty in the United Kingdom.

A listing of faculty members of UK educational institutions is of primary importance in the present research oriented nature of higher education. The BAR successfully attempts to provide one such listing of accounting faculty in the UK.

The BAR is published every two years by Academic Press for the British Accounting Association in association with the Institute of Chartered Accountants in England and Wales. The BAR provides a listing of 1144 accounting faculty members in accounting and finance areas, throughout the UK, across 95 universities, polytechnics and colleges. The BAR is compiled from voluntary information provided by, and serves as a source of information on accounting and finance faculty of these British institutions. The three indices – by institution, by name of academic staff member, and by subject area – provide a cross-reference between the faculty members and their fields of interest or specialization.

The subject areas in accounting and finance are divided into 15 areas. The categories are: accounting history, the accounting profession, accounting theory, auditing, business finance and financial markets, computing, education, financial accounting and reporting, government public sector and other not-for-profit organizations (including financial institutions), international aspects, management accounting, methodology and methods (including quantitative method and OR), taxation and other aspects of accounting and finance practice, theory and research.

The BAR lists the faculty members at each institution. The institutions are listed alphabetically. Information relating to the institution consists of address, telephone, telex, fax, and E-mail numbers. Within each institution is a listing of academic staff.

Information on the academic staff consists of name, degrees and qualifications, position and title, teaching specialization, research interests and research status. Status relates to the status of research interest which is divided into two main sections: research and Ph.D. work. The research section is subdivided into: (A) project with at least one full time, paid researcher financed by external research grant; (B) project financed by external research grant but without full-time, paid researcher; (C) completed project where results have been published in the period covered by the register; (D) continuing research activity where some results have been published; (E) project where some data/papers have been completed (but not published) and may be available to inquirers; and (F) area of research not yet at a stage where data or papers could be made available to inquirers. The Ph.D. work section is classified as O; registered for own Ph.D.; and S; supervision of Ph.D. students. This is a very interesting sub-classification. It reflects the importance of research and publications at the British institutions.

Following the faculty members section are sections noting current staff changes, other news, further details of research projects, and publications. The update on staff contains information about career and promotional changes and movements within faculties or institutions. The other news section reports miscellaneous research-related activities in the institutions; these cover seminars, conferences, meetings, lectures, and other useful related information. The section on further details of research projects describes in detail the research projects being conducted by the various universities. The section on publications lists the publications of the faculty members. Publications are listed for the years 1988 and 1989.

The BAR substantially achieves its role of providing information on faculty members. However, BAR could be more informative if the sections of the text were more clearly labeled. The name index could be improved if some additional information were added: e.g., institution, position, area of interest, highest qualification, and starting date. Furthermore, the listing of faculty members within each institution does not have a common indexing method; sometimes, members are listed in terms of seniority and elsewhere alphabetically. One of these two methods should be adopted consistently.

The BAR is useful to members of the academic and professional community who are concerned with research and teaching activities in educational institutions in the UK in the areas of accounting and finance. The BAR is an excellent tool of communication and cooperation between members of the British Academic Community and its counterparts internationally, and could serve as a useful model for other national accounting groups.

Copies of the BAR are free to members of the British Accounting Association. The BAR is available to non-members for £10 from Academic Press Ltd., 28–24 Oval Road, London NW1 7DX.

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Interpreting European Financial Statements: Towards 1992 *by Christopher Nobes, Butterworth, London, 1989, 182 pp, £50.00.*

In this short (106 pages of text plus appendices) exposition of financial reporting among European countries, Christopher Nobes emphasizes the effects of diverse European origins on the differences in financial reporting. This book covers all countries in the European Community, but pays primary attention to the more industrialized countries, such as France, Germany, and the Netherlands. Where one European country is used as a basis for comparison, that country tends to be the UK, which is the home country of the author. At appropriate points references are made to countries, such as Sweden and Switzerland, which are not part of the European Community.

The author has written this book for financial statement users, such as financial managers and auditors of multinationals, and for international analysts, investors, and lenders. Given the book's "practical rather than academic purpose," references have been kept to a minimum. The author believes the book to be "useful to readers in any country, both within and without the European Community." Interestingly, the author does not actually state his purpose in writing the book, or in what ways the book is to be useful to the various groups enumerated. Perhaps the author feels that it is obvious that the book will be useful to the reader in understanding and reading financial statements of countries from various countries. This omission does not take away from the fact that the book is a very interesting and informative guide to current financial reporting in Europe and should be of interest to academics as well as practitioners.

Chapter 1, a background chapter, summarizes the factors that have led to financial reporting diversity in Europe. This diversity is described under "seven factors (which) cumulate to a powerful explanation of the cause of financial reporting differences: legal systems, providers of finance, taxation, the profession, inflation, theory, and accidents." The author sees international harmonization as something that is "thrust" on many countries directly by the European Community. In many ways this book is a description of how these countries are coping with this external force.

Chapters 2, 3, and 4 are overview chapters dealing respectively with European differences in financial reporting, classification of financial reporting in Europe, and European community harmonization. Chapter 2 groups the differences in financial reporting into eight broad categories: fairness, taxation, conservatism and accruals, provisions and reserves, valuation bases, consolidations, uniformity and accounting plans, and shareholder orientation of financial statements. Especially noteworthy in Chapter 2 is the lucid discussion of practices that affect comparability, but which are not apparent on the surface. Two examples are the greater conservatism and use of reserves in continental Europe. The large differences in consolidation methods among countries are also well described.

Chapter 3 is an interesting chapter in that it proposes a new classification scheme for grouping countries according to their systems of financial reporting. Rather then a non-hierarchial classification based on economic factors, spheres of influence,

measurement practices, or geographical models, as previous studies have done, Nobes develops a hierarchial approach that combines many of these factors and attempts to show how the accounting practices in various countries are related. The first level of the hierarchy is micro-professional or macro-uniform accounting systems. The micro-based is divided into business economic theory and business practice or pragmatic. The latter category is then divided into UK or US influence. The macro-uniform is divided into continental: government tax or legal and government economics category. Under this system, it is possible to see that the Netherlands micro/professional-business economics) is more closely related to the UK (micro/professional-pragmatic) than to Germany (macro/uniform-law).

After an introductory discussion of the definition of harmonization and the factors for and against it, Chapter 4 examines the European Community directives that are most relevant to financial reporting. These are the second, fourth, and seventh directives. Disappointingly, the eighth directive on the qualifications and work of auditors is not discussed.

Chapters 5–8 address major areas of differences among European financial reporting practices. Although Chapter 5 is titled the "Publication and Audit of Accounts," this brief, six-paged, chapter limits the discussion of auditing to a discussion of what companies from the UK, Netherlands, France, and West Germany must be audited. Most of the chapter deals with the differences in format of the financial statements in these four countries. An extended appendix to the chapter shows the detailed differences in classifications and formats of typical income statements (profit and loss) accounts and balance sheets in these four countries.

Chapter 6 addresses a more substantive issue, differences in the valuation of assets. In the section on tangible fixed assets, Nobes shows a tangle of valuation methods for these important assets, ranging from strict historical cost in Germany to replacement cost for some Netherlands companies to the annual revaluation of investment properties in the UK and Ireland. While it is the practice in many countries to write off intangibles on purchase, some UK companies have begun to value and capitalize internally developed brand names. in the area of net assets or stockholders' equity, the treatment of minority interests and untaxed reserves in Germany and Sweden affect comparability with other countries. Chapter 7, entitled "Profit Measurement," looks further into the measurement methods of major items of expense. included are examination of depreciation, deferred tax, provisions and reserves, extraordinary items, and pensions. The chapter ends with a discussion of differences in the construction or presentation of the profit and loss account, for example, the location and treatment differs among companies for extraordinary items, taxes, dividends, minority interests, and reserves.

Chapter 8 addresses one of the most contentious subjects in international financial reporting, that of group accounting or consolidations. Here group accounting practices, including accounting for associates and joint ventures, goodwill, foreign currency translation, and segment reporting, primarily in the UK, Switzerland, France, and Germany are surveyed.

In the concluding Chapter 9, the author proposes that in spite of the many existing differences in financial measurement and reporting, there is movement toward harmonization and that "Perhaps, the greatest force for the removal of differences is

commercial pressure." Evidence of this pressure can be seen in "the large number of annual reports from large continental European companies that are translated into English (often American English) and the widespread adoption of Anglo-American techniques such as the equity method of consolidation and lease capitalization." The chapter ends with a summary of the general adjustments that need to be made to the accounts of the macro group (all but UK, Ireland, and Netherlands) to the micro group (UK, Ireland, and Netherlands). Finally, Appendices I and II contain specimen financial statements for a French company and a Germany company. Appendix III is an extensive glossary of accounting terms in English, Spanish, French, and German.

In summary, the author has tried to address not only the basic differences in European accounting practices, but also to give some insight into the underlying causes for the differences. Readers who already have some understanding of European financial reporting may find this book to be too brief, but readers unfamiliar with European accounting practices will find this book a concise, useful, and very readable survey. The latter group of international financial managers, analysts, investors, and lenders will find it especially helpful in the interpretation of annual reports of public corporations. If it were not for its high price, it would be an excellent supplement for an accounting theory course that includes an international flavor.

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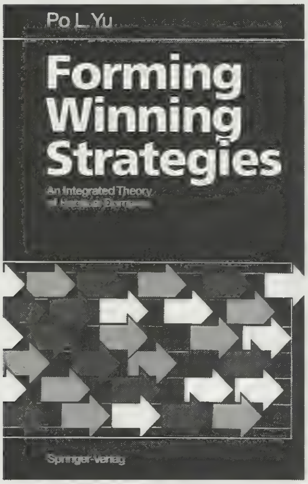

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